

100

2

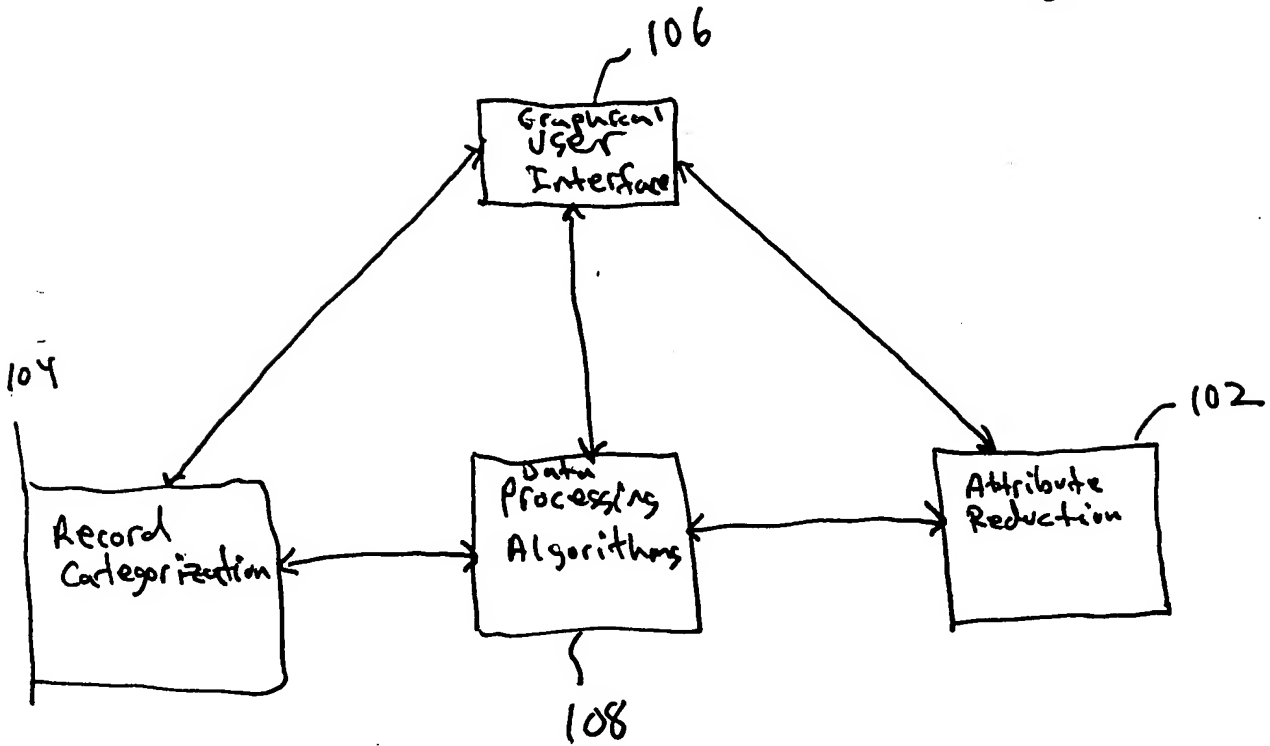


Figure 1

100764-0150

200

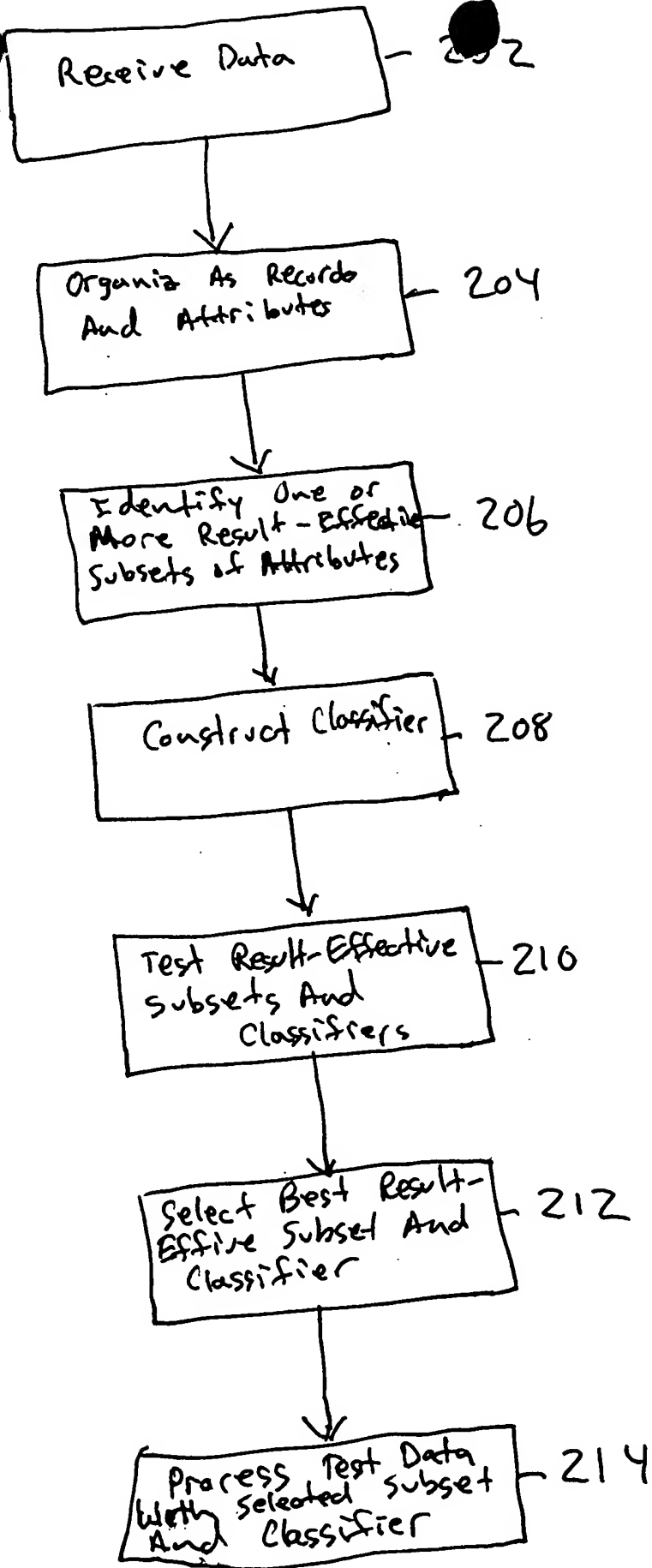


Figure 2

2218917

302

Variable 16
Variable 15
Variable 14
Variable 13
Variable 12
Variable 11
Variable 10
Variable 9
Variable 8
Variable 7
Variable 6
Variable 5
Variable 4
Variable 3
Variable 2
Variable 1

Variable 16
Variable 15
Variable 14
Variable 13
Variable 12
Variable 11
Variable 10
Variable 9
Variable 8
Variable 7
Variable 6
Variable 5
Variable 4
Variable 3
Variable 2
Variable 1

Record 1

308

Figure 3

306

Record n

302

400

1.

102

402a 402b 402c

2218917

Variable 2

Variable 1	Variable 2	Variable 3	Variable 4	Variable 5	Variable 6	Variable 7	Variable 8	Variable 9	Variable 10	Variable 11	Variable 12	Variable 13	Variable 14	Variable 15	Variable 16
B	D	F	1.99	20.80	86	B	1.98	1.60	A	0.30	1.53	1.95	0.95	3.33	495
A		B	2.21	16.00	96	D	2.65	2.33	A	0.26	1.98	4.70	1.04	3.59	1035
B	D	F	1.94	19.00	92	B	2.36	2.04	A	0.39	2.08	2.70	0.86	3.02	312
A		A	2.67	18.60	101	C	2.80	3.24	B	0.30	2.81	5.68	1.03	3.17	1185
A		B	2.70	22.50	101	C	3.00	3.25	A	0.29	2.83	5.70	1.15	2.74	1233
B	D	E	2.42	22.00	86	B	1.45	1.25	A	0.50	1.63	3.60	1.05	2.65	450
B	D	F	2.12	19.00	80	B	1.65	2.03	B	0.37	1.63	3.40	1.00	3.17	510
A		B	2.55	18.00	98	C	2.45	2.43	A	0.29	1.44	4.25	1.12	2.51	1105
A		C	2.60	17.20	94	C	2.45	2.99	A	0.22	2.29	5.60	1.24	3.37	1265
B	D	F	2.17	21.00	85	B	2.60	2.65	B	0.37	1.35	2.76	0.86	3.28	378

LOW HIGH

Figure 4B

2218917

THE UNIVERSITY OF CHICAGO

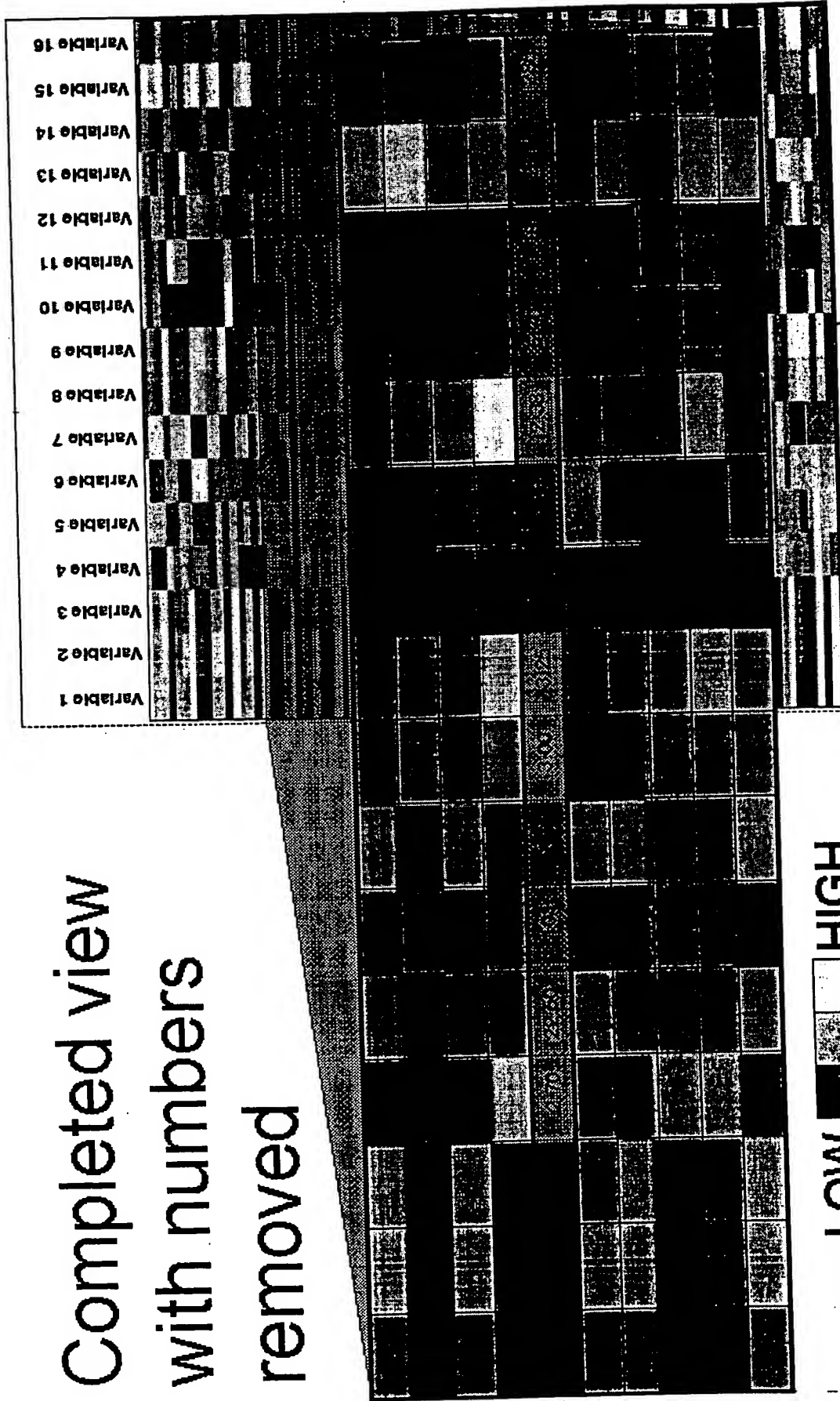
205120 4694001

304

Completed view
 with numbers
 removed

400

308



306

402

Figure 4D

402a 402b 402c

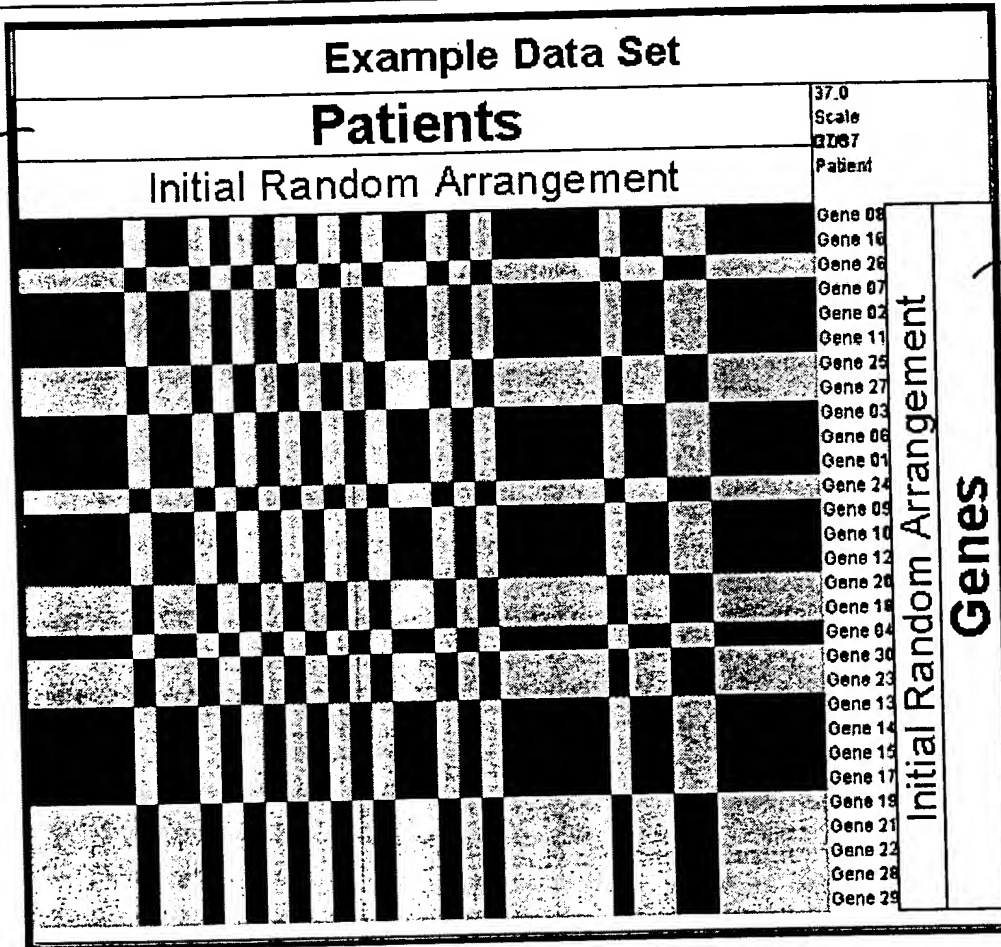
2218917

Ideal Case

Random

500

502



504

Figure 5A

Ideal Case

Sorted by Patients

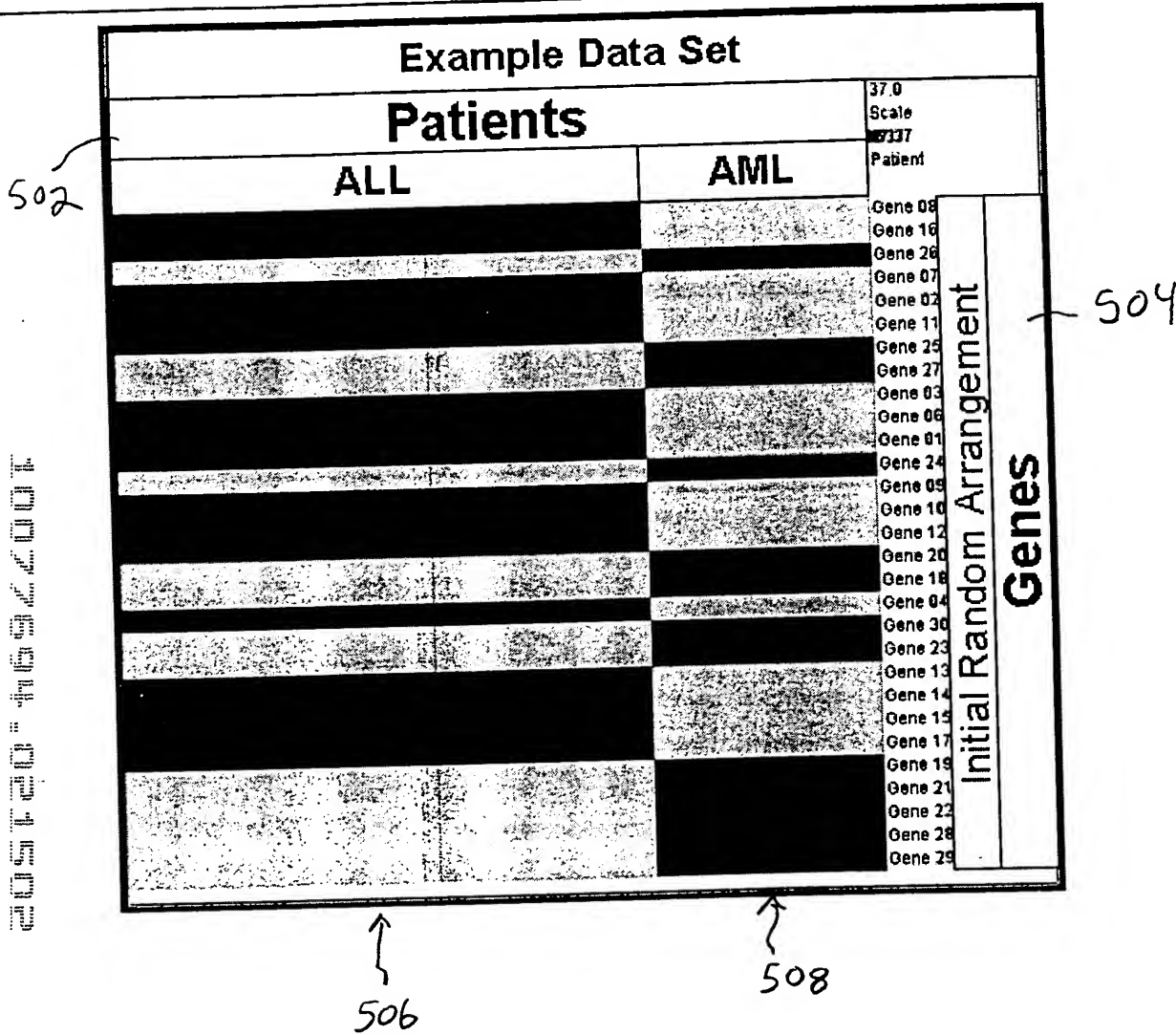


Figure 5B

2218917

Ideal Case

Grouped on Genes

500

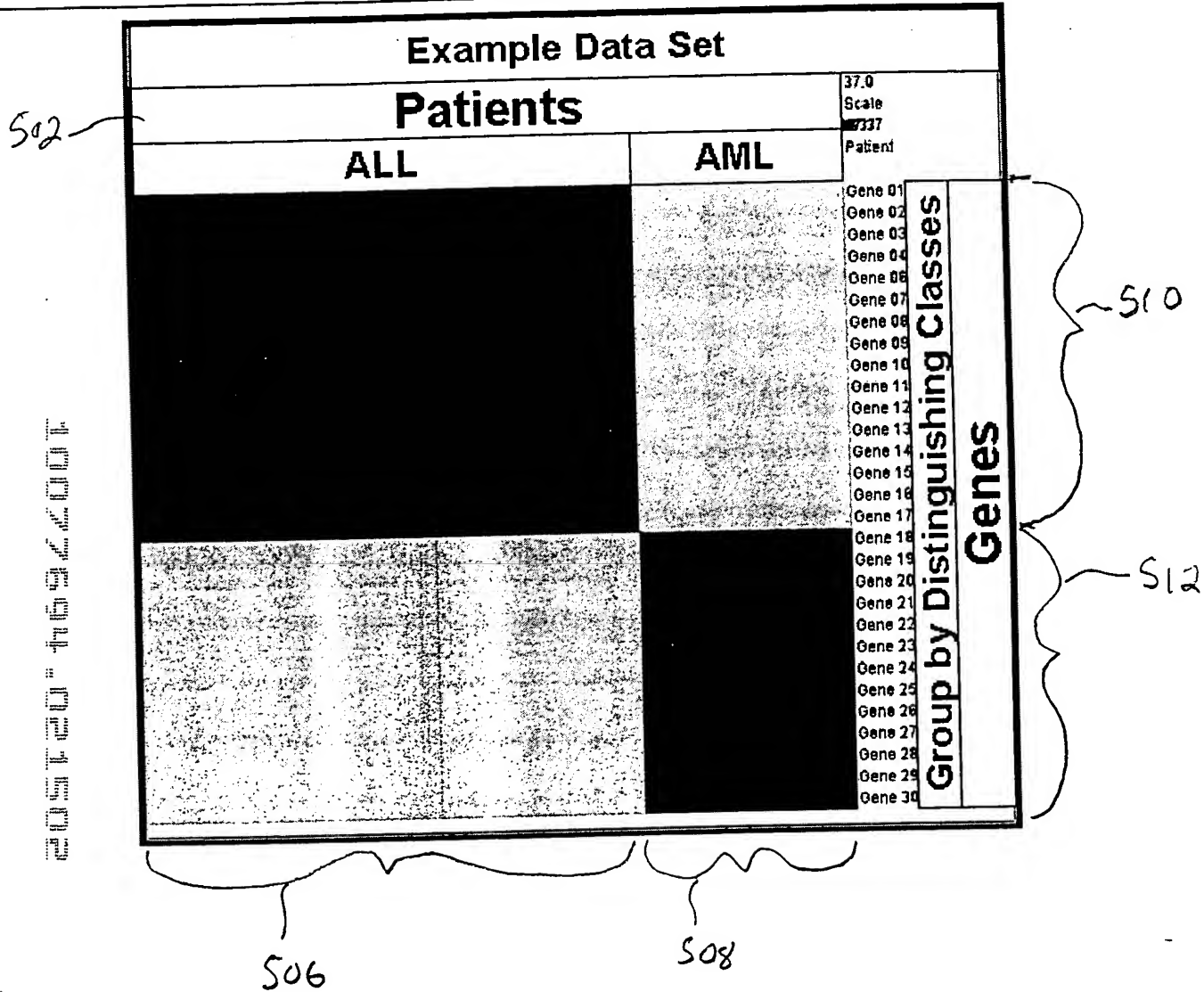


Figure 5C

2218917

5 C

Random

600

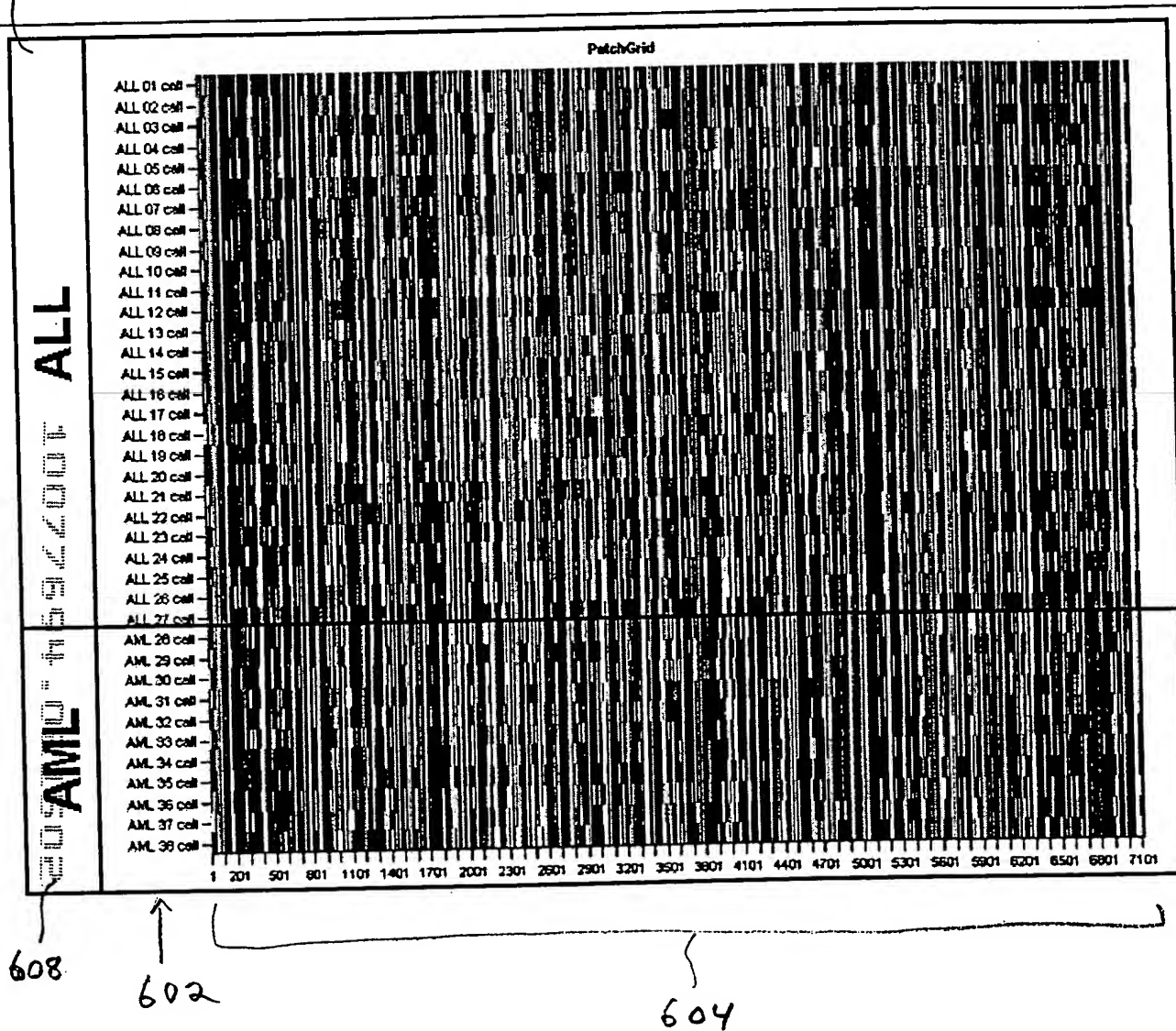


Figure 6A

2218917

600

Sort 1st Dimension

606

602a

610

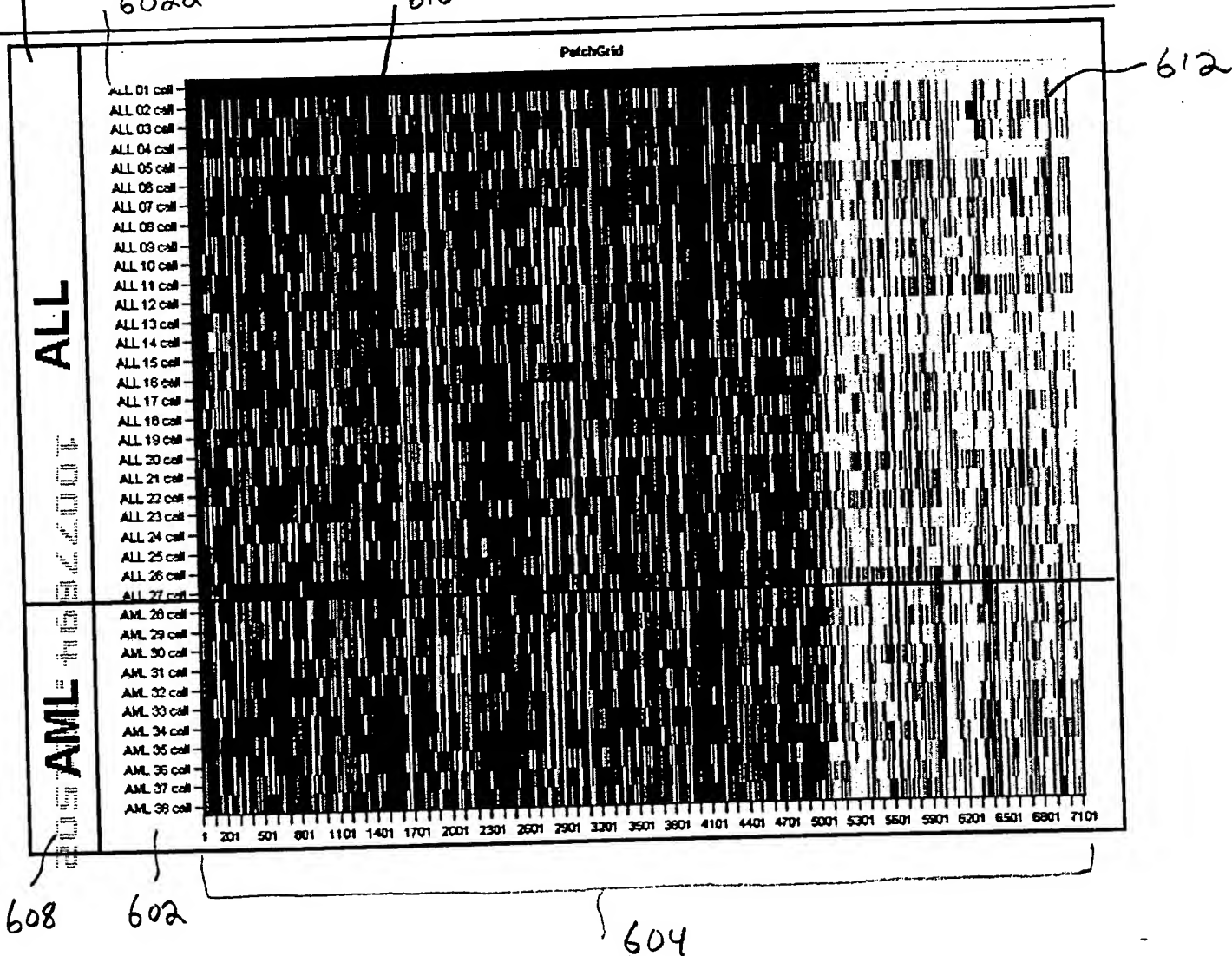


Figure 6B

2218917

63

12/17/01

600

Sort 2nd Dimension

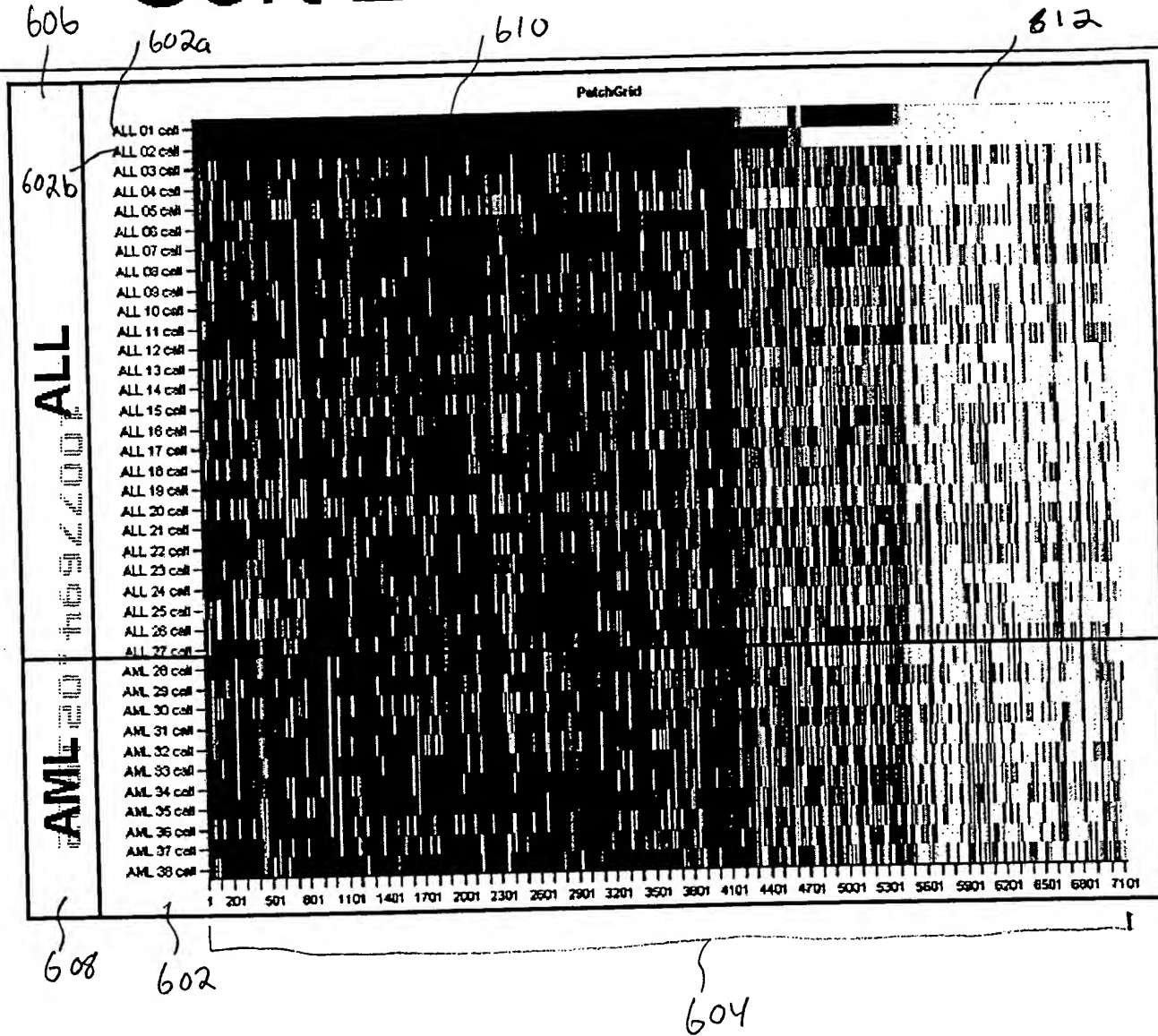


Figure 6C

2218917

6C

12/17/01

Sorted 5 Dimensions

600

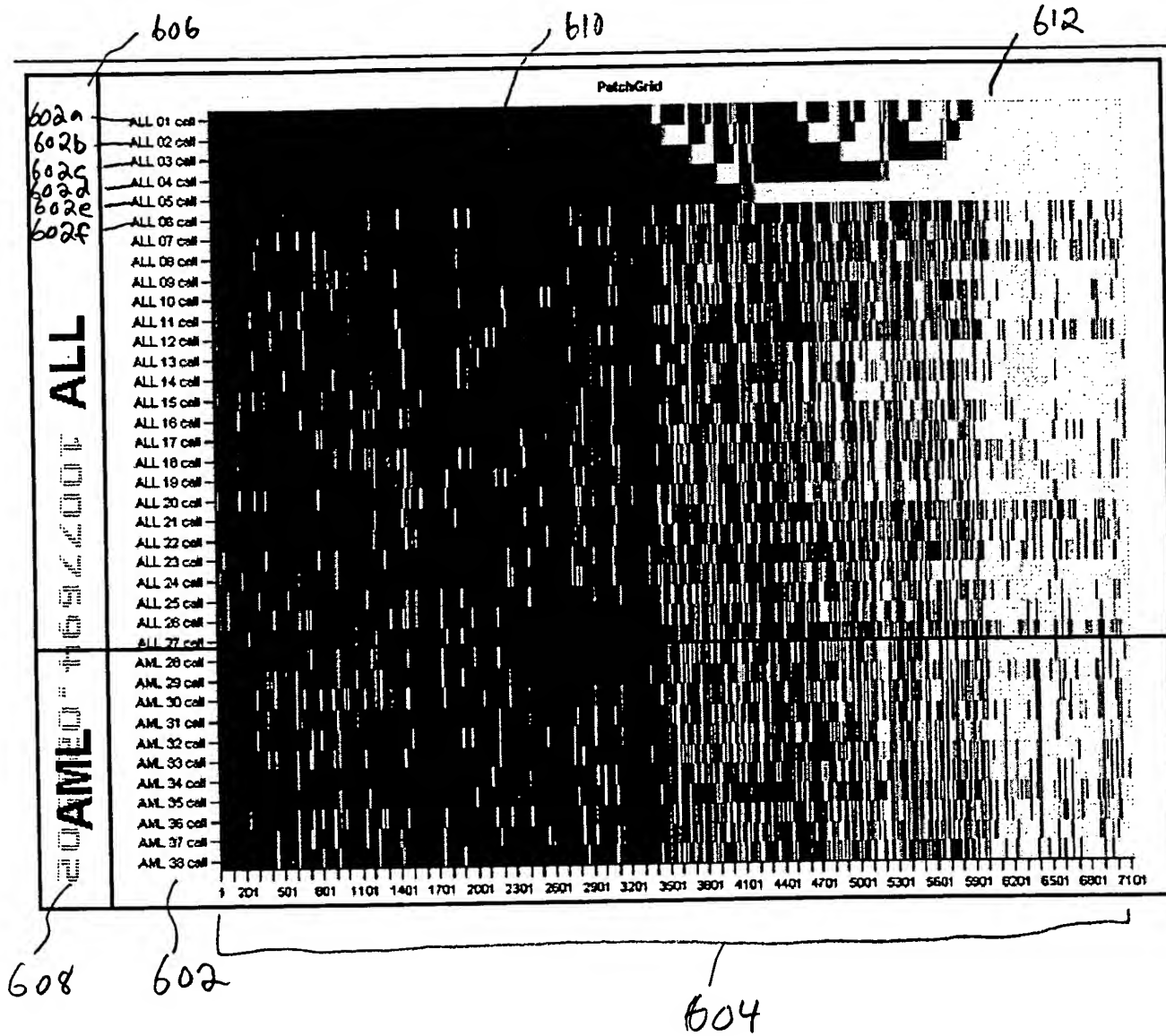
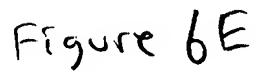


Figure 6D

2218917

(D)



2218917

All Dimensions Sorted

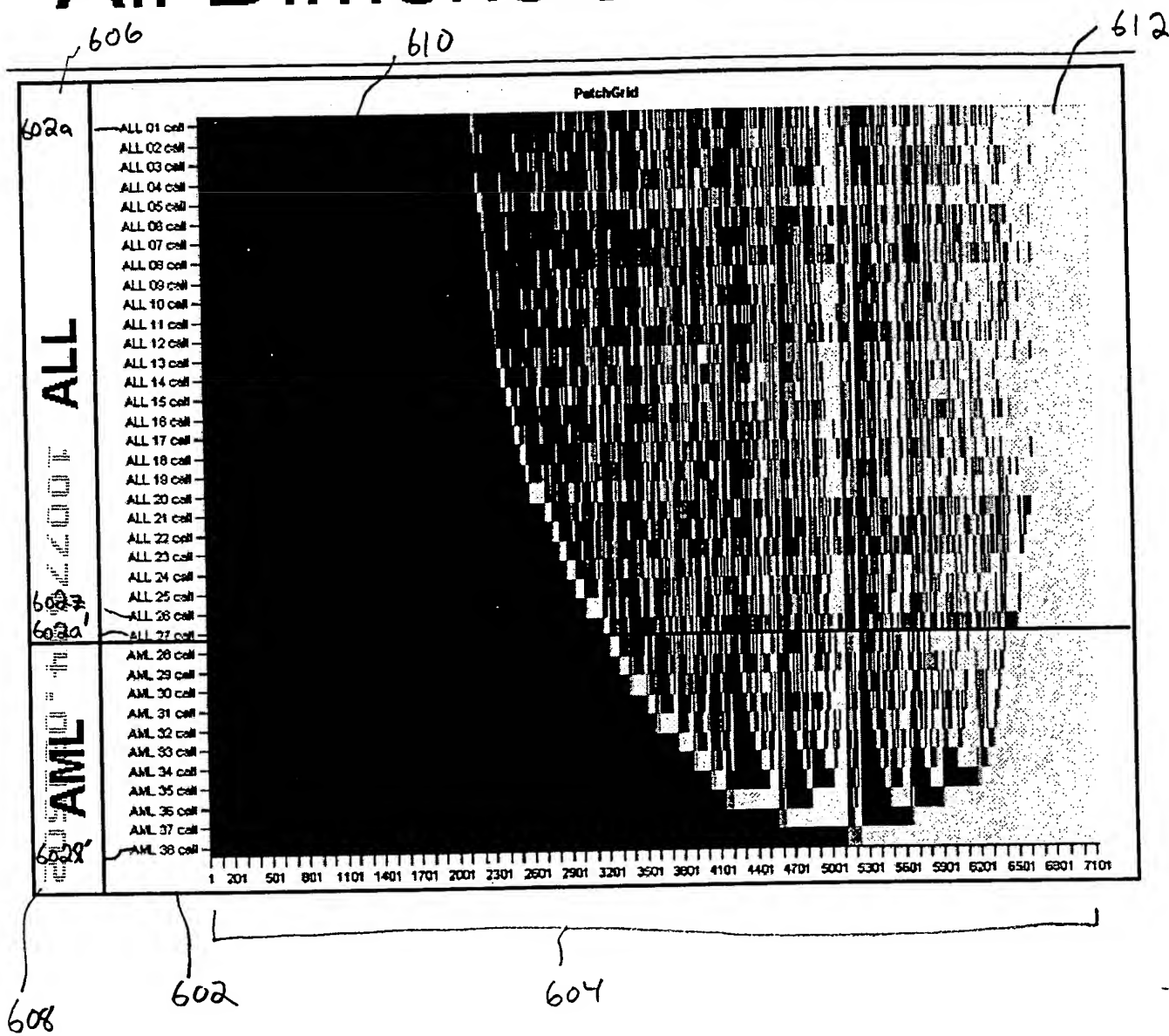


Figure 6F

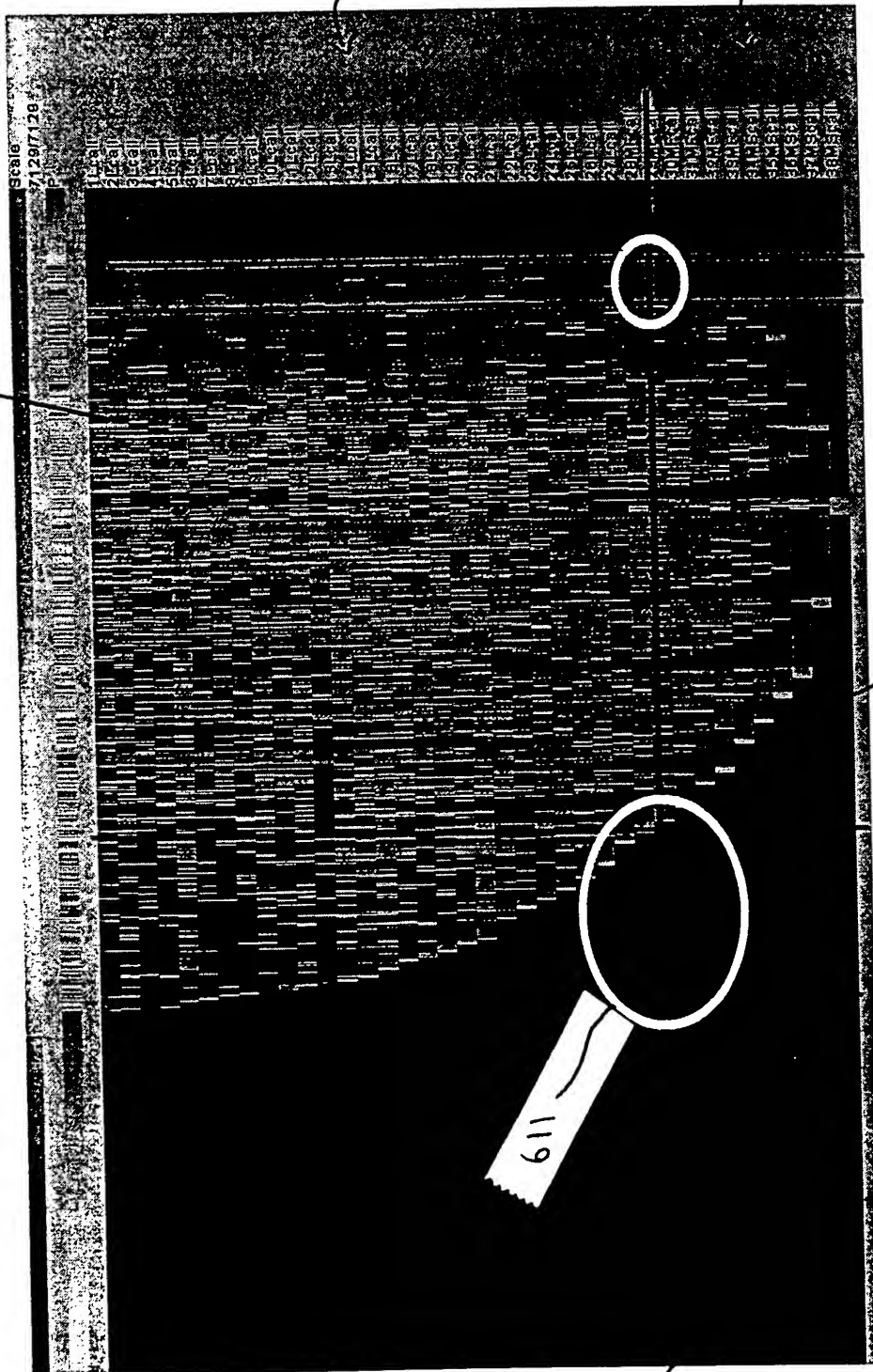
2218917

6F

205120" 4694200T

600

634



606

608

630

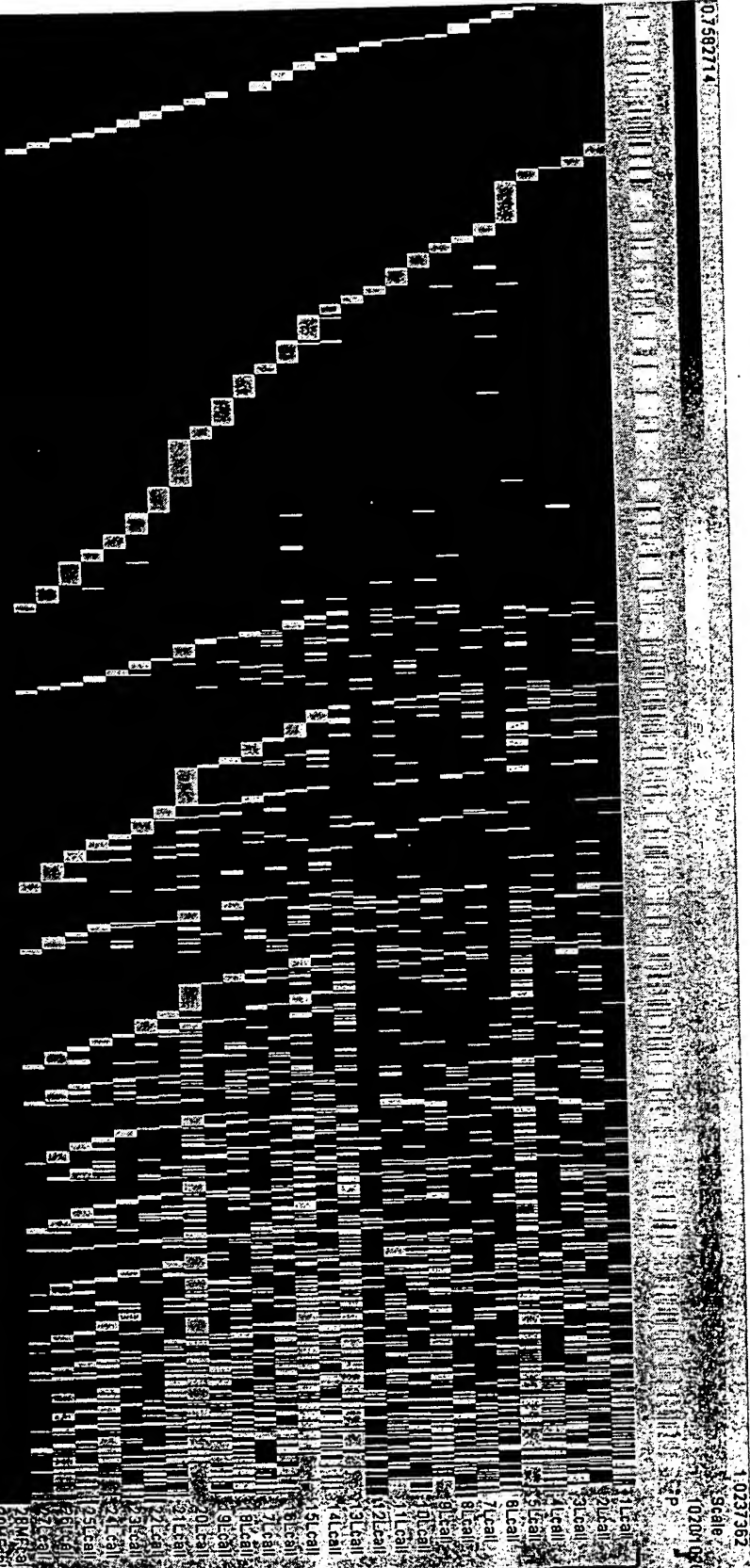
623

Figure 6G

624

620

618



10077694-021504
Figure 6

634

608

606

205120-4692001

1882502

Principal Uncorrelated Record Selection

RadMz Training Data Set

File Display Mapping Layout Selection Data

Mark Related Records

PUR Selection

start threshold

adjust increment

final record count

Selects records that do not correlate highly with the currently marked records. If no records are marked, all records correlating with any other records will be marked.

OK Cancel

700

702

0.5

0.0

10

704

706

710

ALL 1

ALL 2

ALL 3

ALL 4

ALL 5

ALL 6

ALL 7

ALL 8

ALL 9

ALL 10

ALL 11

ALL 12

ALL 13

ALL 14

ALL 15

ALL 16

ALL 17

ALL 18

ALL 19

ALL 20

ALL 21

ALL 22

ALL 23

ALL 24

ALL 25

ALL 26

ALL 27

ALL 28

ALL 29

ALL 30

ALL 31

ALL 32

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ALL 34

ALL 35

ALL 36

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ALL 41

ALL 42

ALL 43

ALL 44

ALL 45

ALL 46

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ALL 82

ALL 83

ALL 84

ALL 85

ALL 86

ALL 87

ALL 88

ALL 89

ALL 90

ALL 91

ALL 92

ALL 93

ALL 94

ALL 95

ALL 96

ALL 97

ALL 98

ALL 99

ALL 100

Figure 7

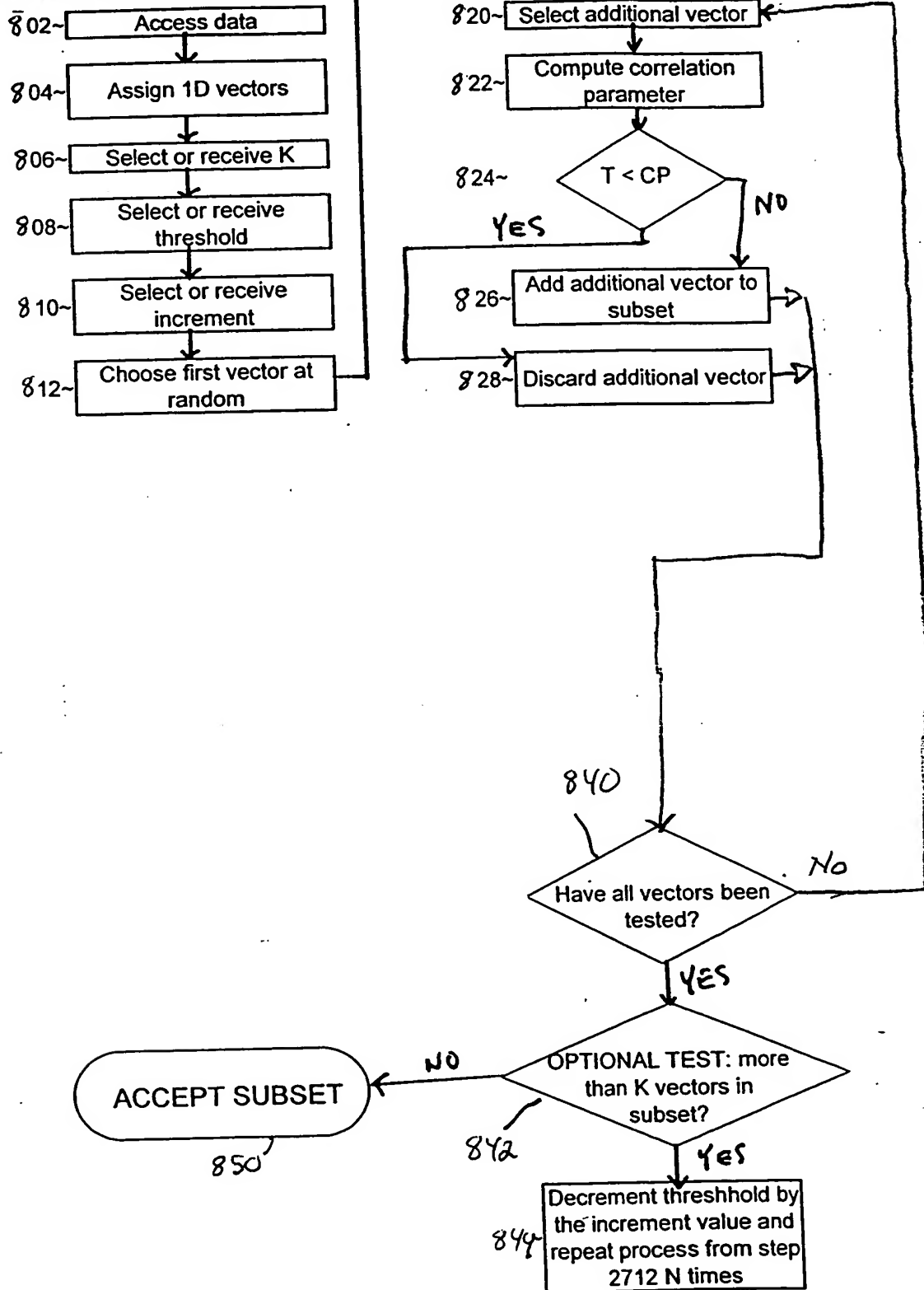


Figure 8.

4286522

2005-04-20 16:42:00

76 Principal Uncorrelated Genes

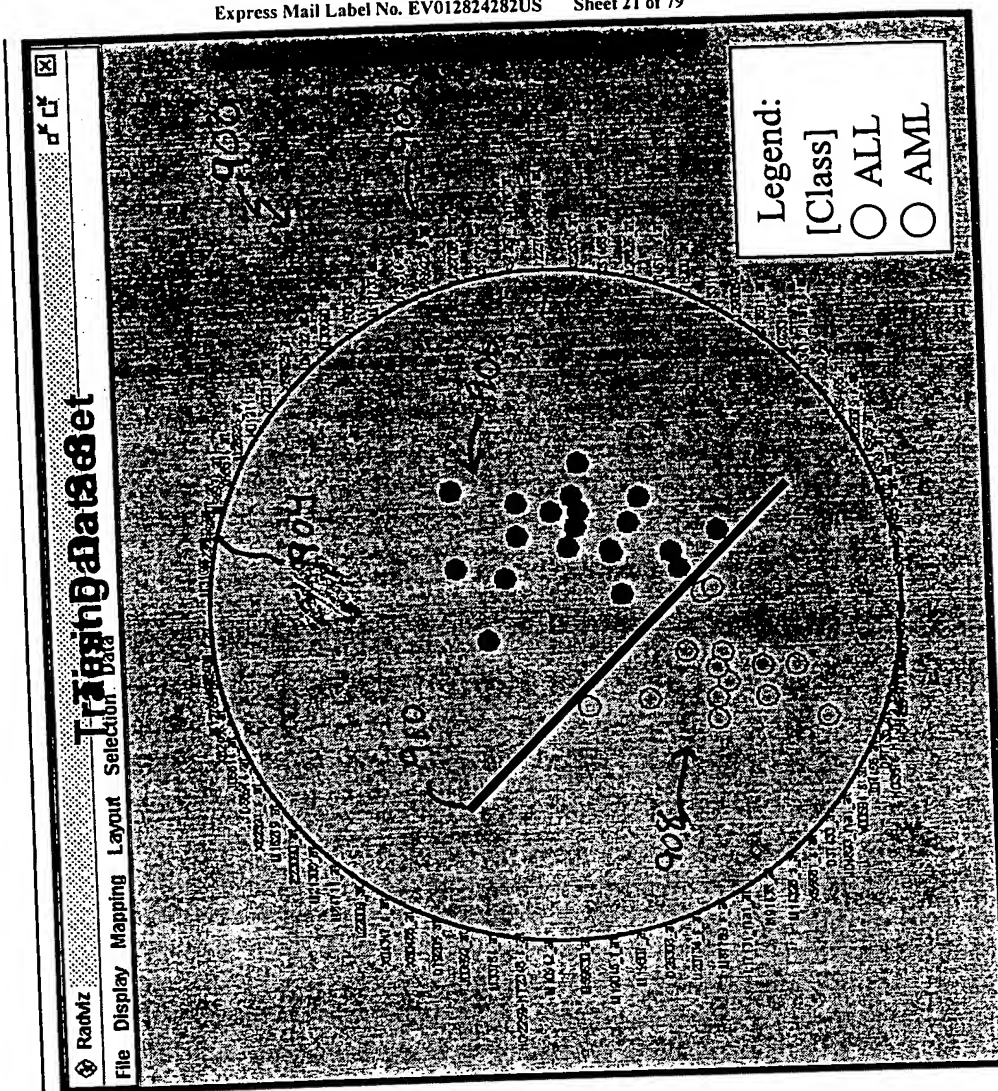


Figure 9

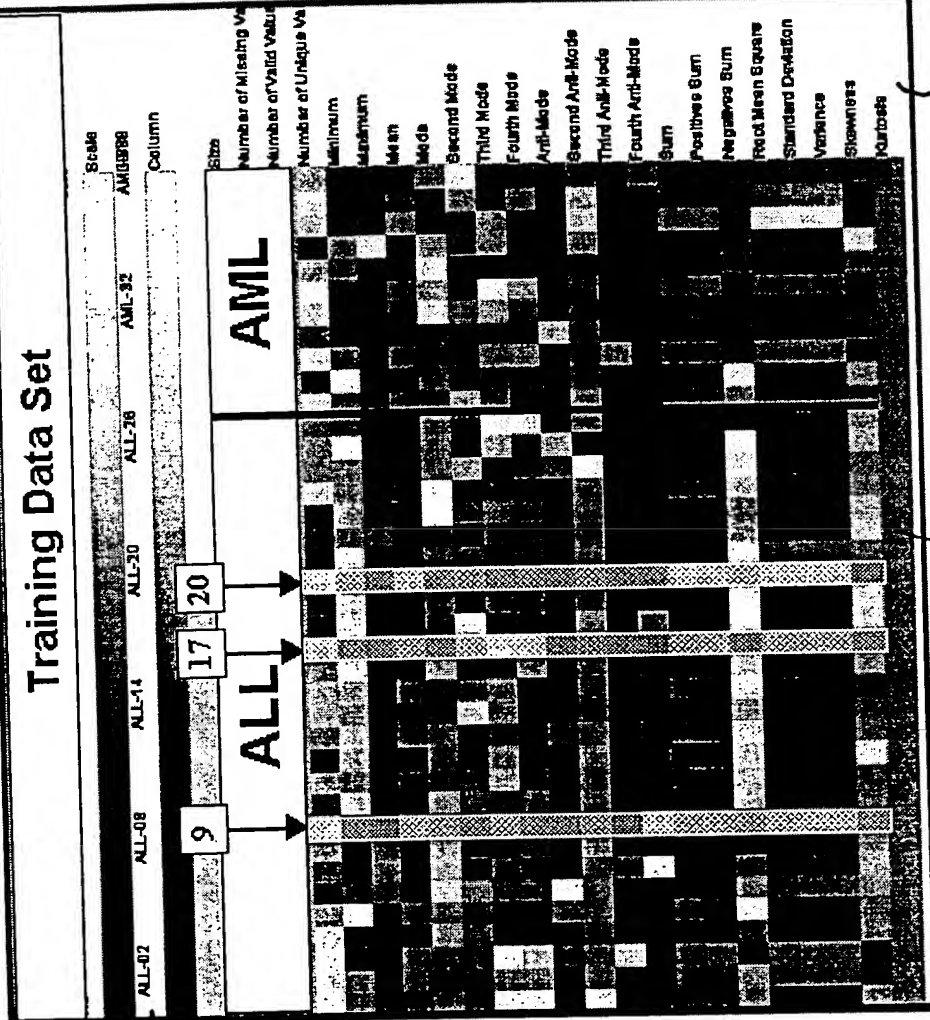
205120 16922001

Statistical Metadata

(Affymetrix Absolute Data)

1000

Training Data Set



602

1008



LOW HIGH

1004

1002

Figure 10A

205120-16942001

Pearson Correlation Coefficients (Affymetrix Absolute Data)

1001
2

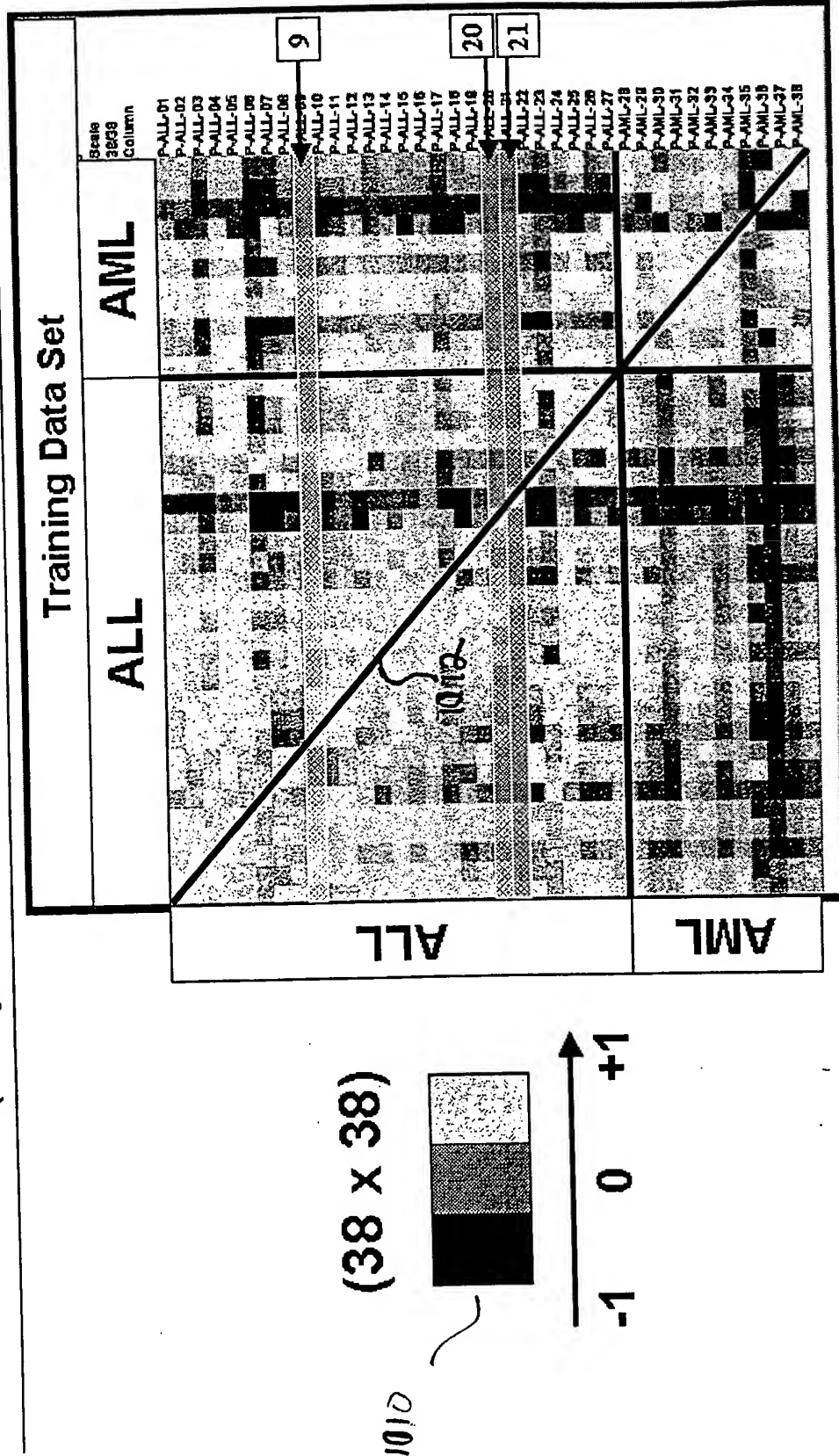


Figure 10B

2218917

205120:4692200F

Pearson Correlation Coefficients (Affymetrix Comparative Data)

1003

2

Title: Method And System For Data Analysis
Inventor(s): Gee et al.
Serial No. Not yet assigned
Docket No. ANV-001
Contact: John V. Bianco 617-248-7870
Express Mail Label No. EV012824282US Sheet 24 of 79

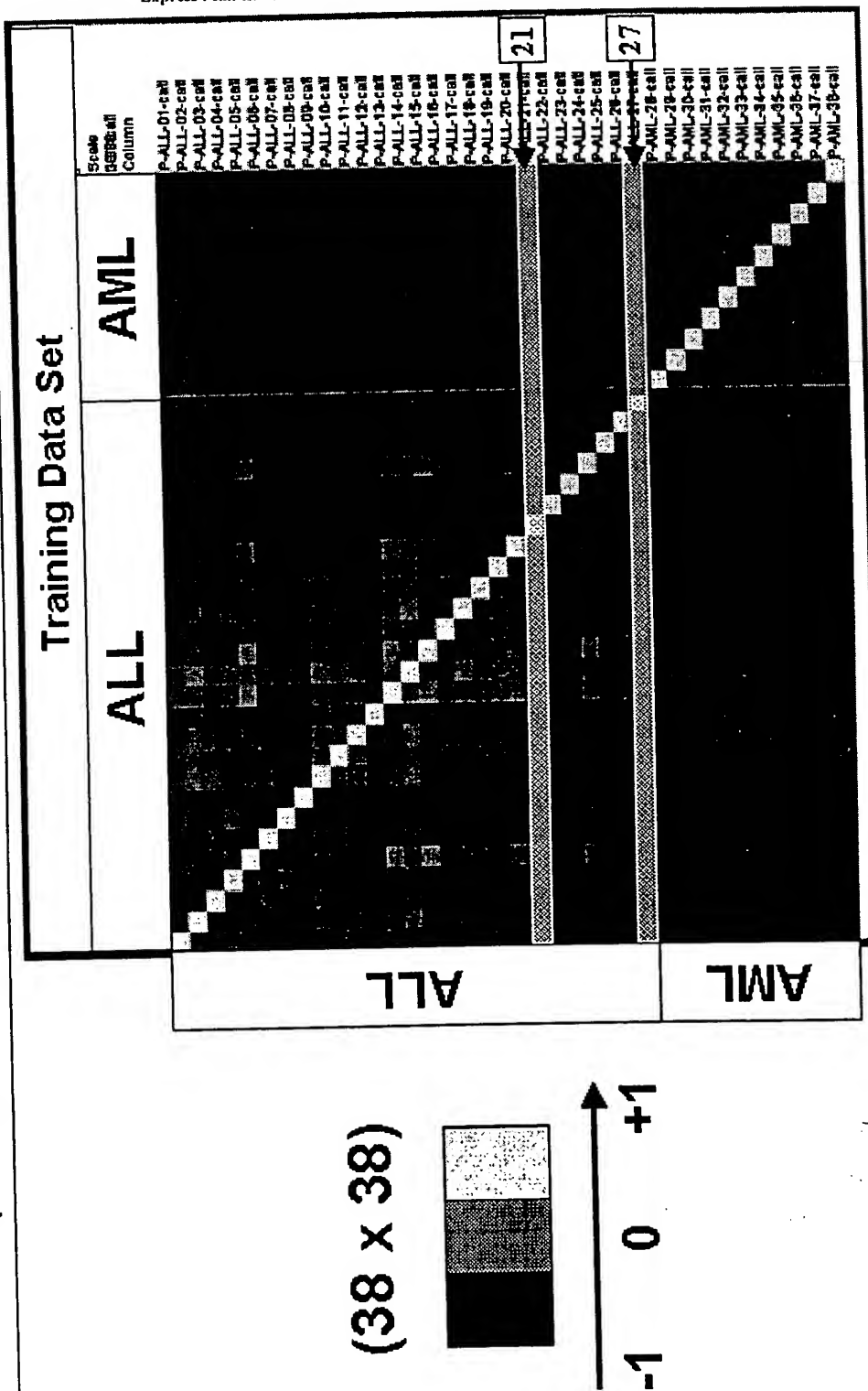
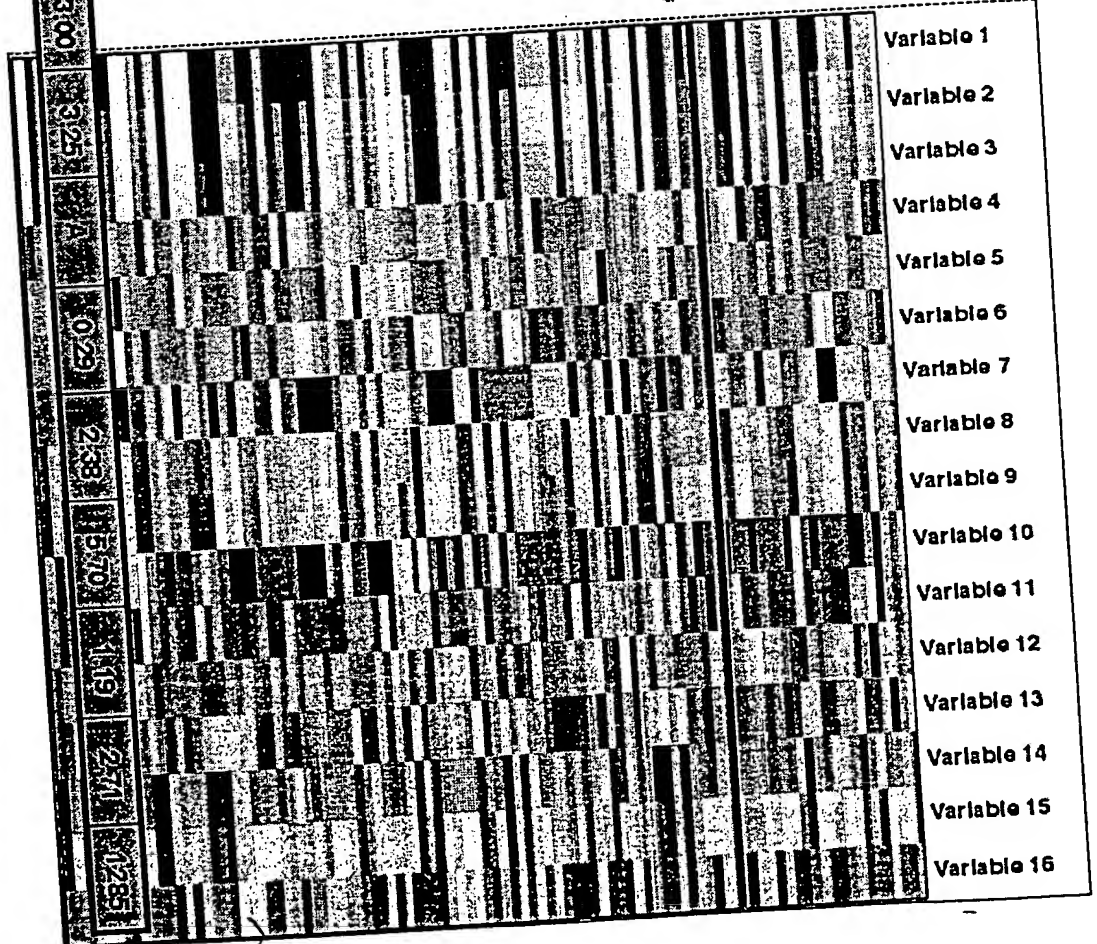


Figure 10C

2218917

Final Result

Example Record 20



Variable 1
 Variable 2
 Variable 3
 Variable 4
 Variable 5
 Variable 6
 Variable 7
 Variable 8
 Variable 9
 Variable 10
 Variable 11
 Variable 12
 Variable 13
 Variable 14
 Variable 15
 Variable 16

1.00

306

Figure 11A

10077694.021502

2218917

205T20-4692200F

Sort - Variable 1

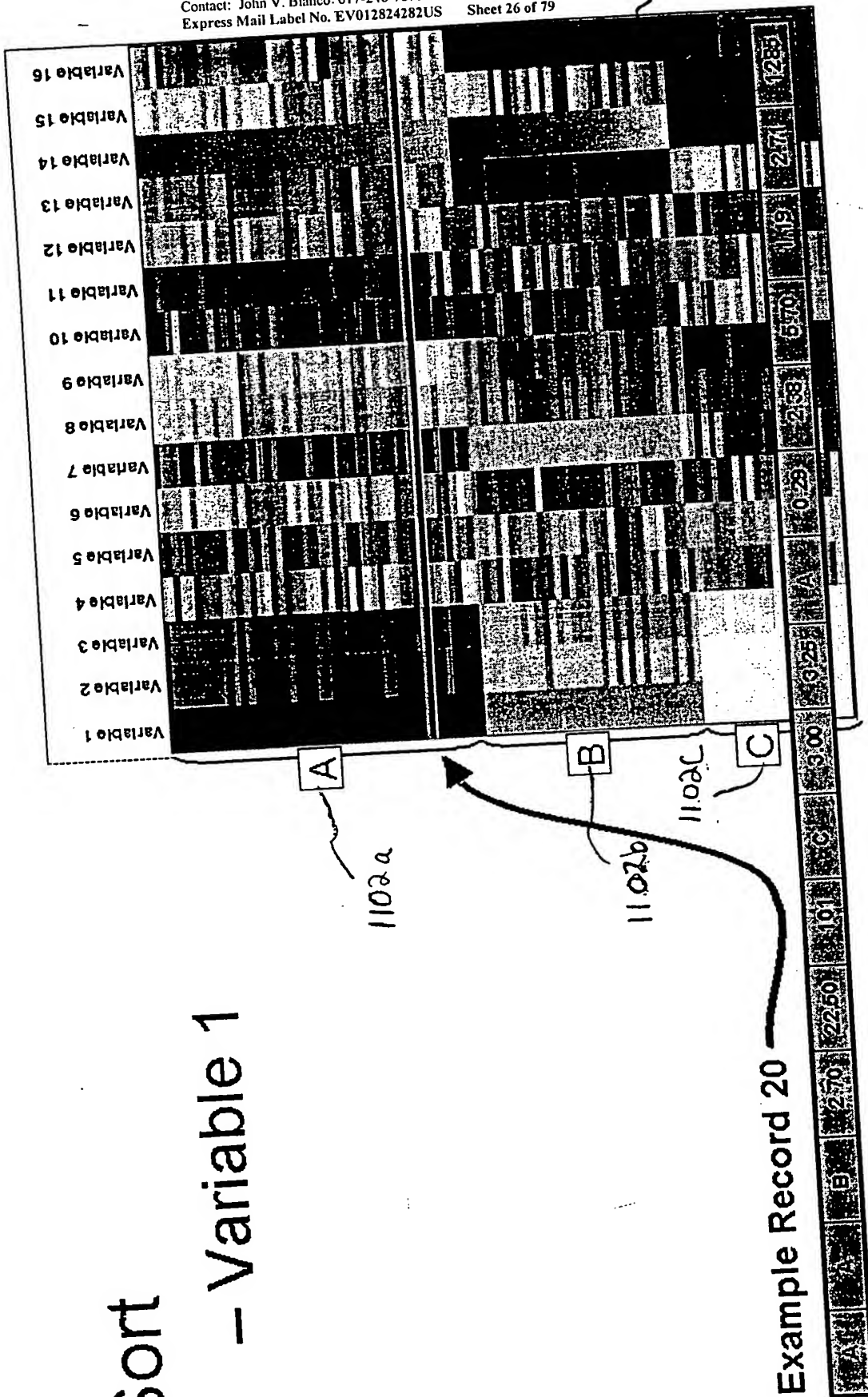
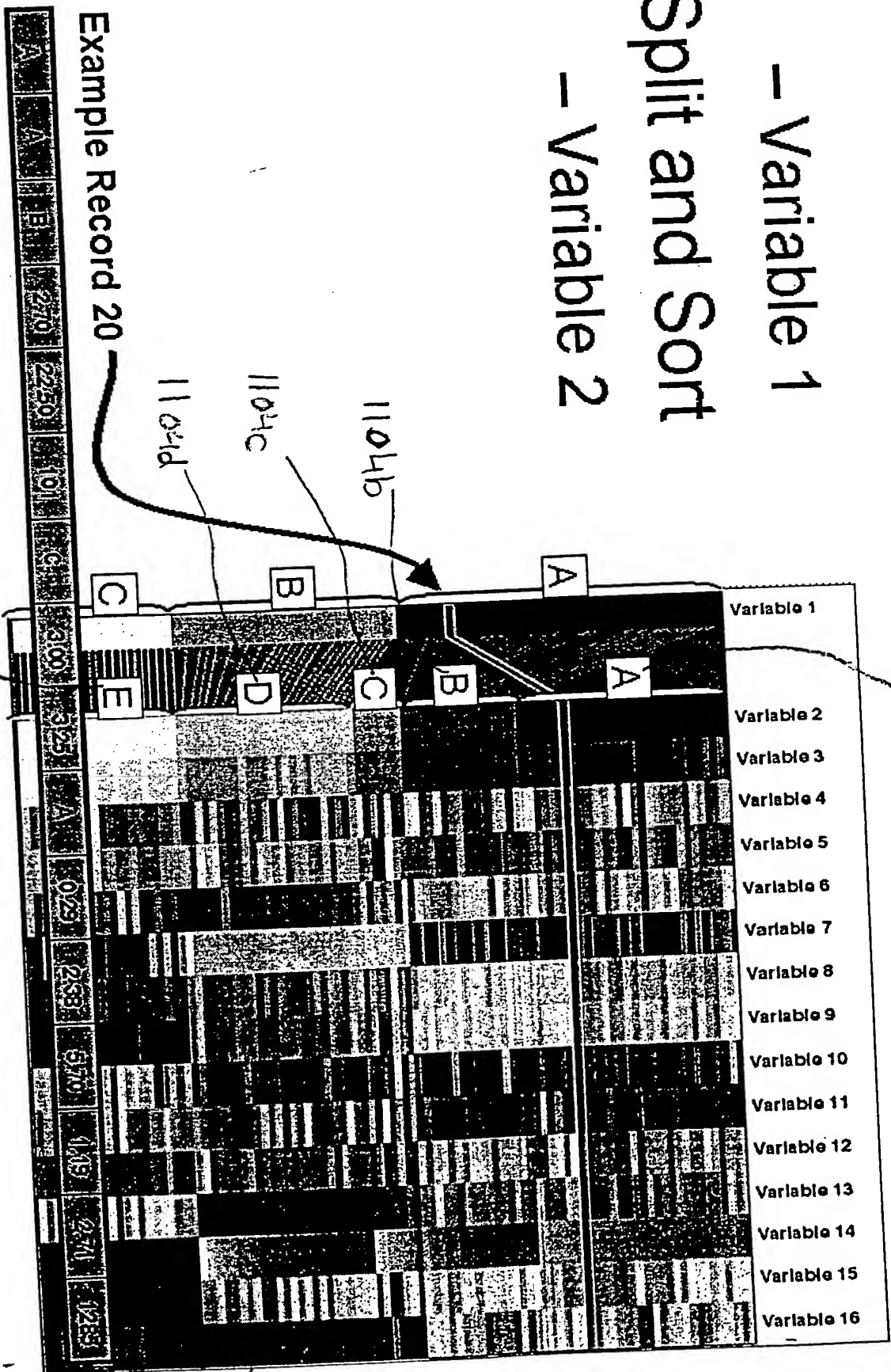


Figure 11B

2218917

– Variable 1 Split and Sort – Variable 2



1104e
 Figure 11C
 10077694-021902

2218917

306

Split and Sort

— Variable 1
 — Variable 2
 — Variable 3

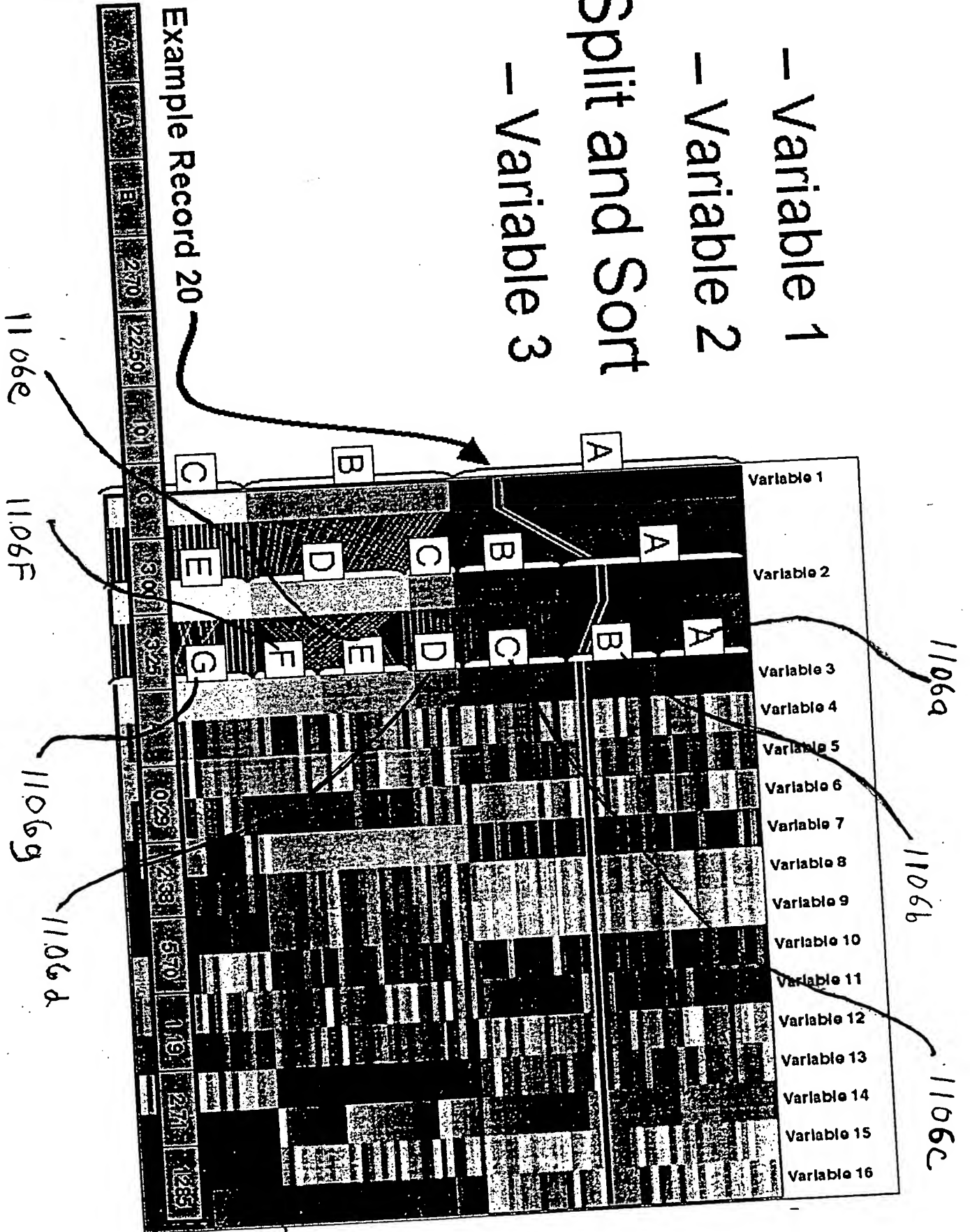
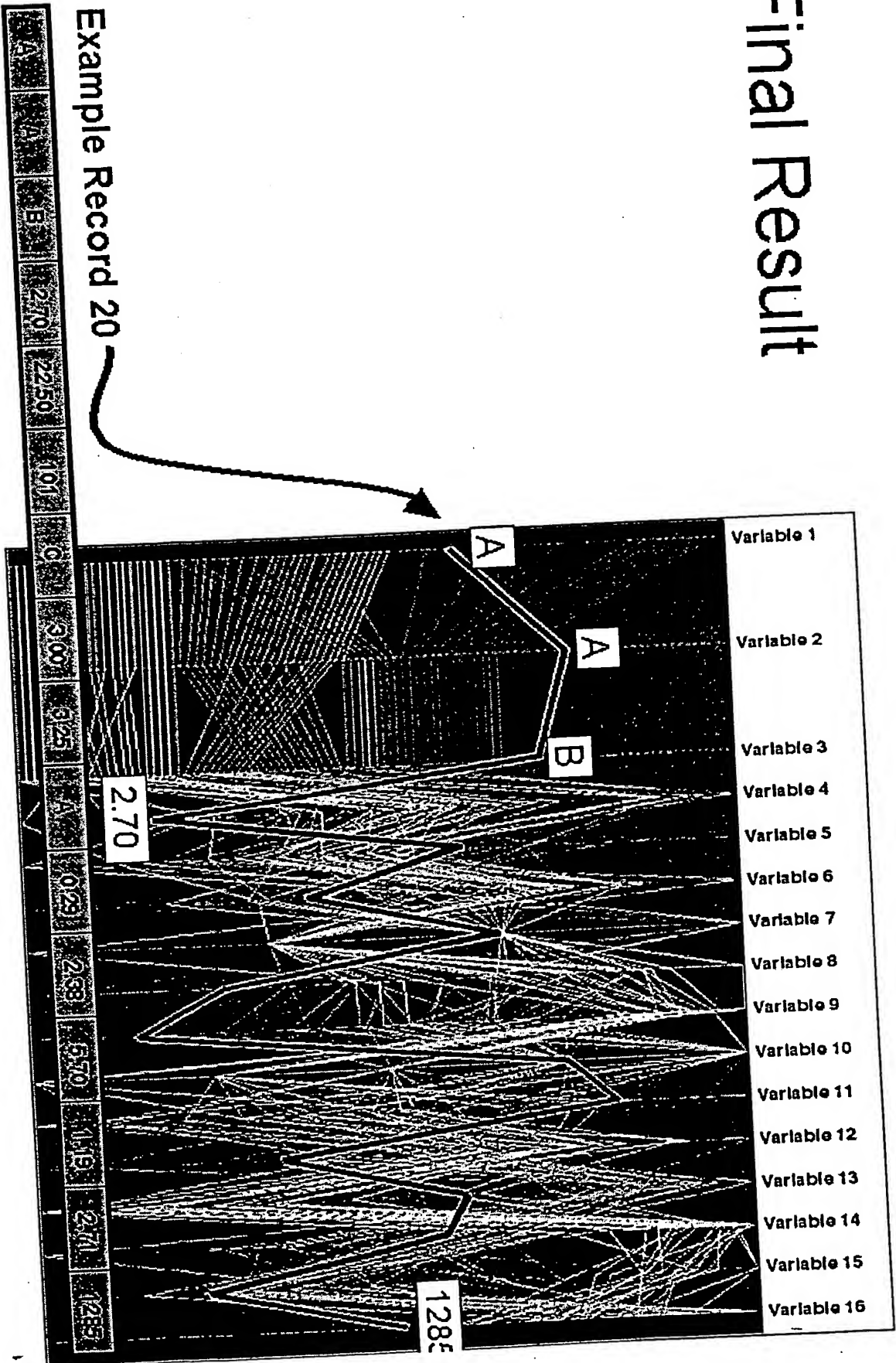


FIGURE 11D

Final Result

Example Record 20



1007 Figure 11E

2218917

205T20-1694200T

1200
↙

Example record showing the underlying connections

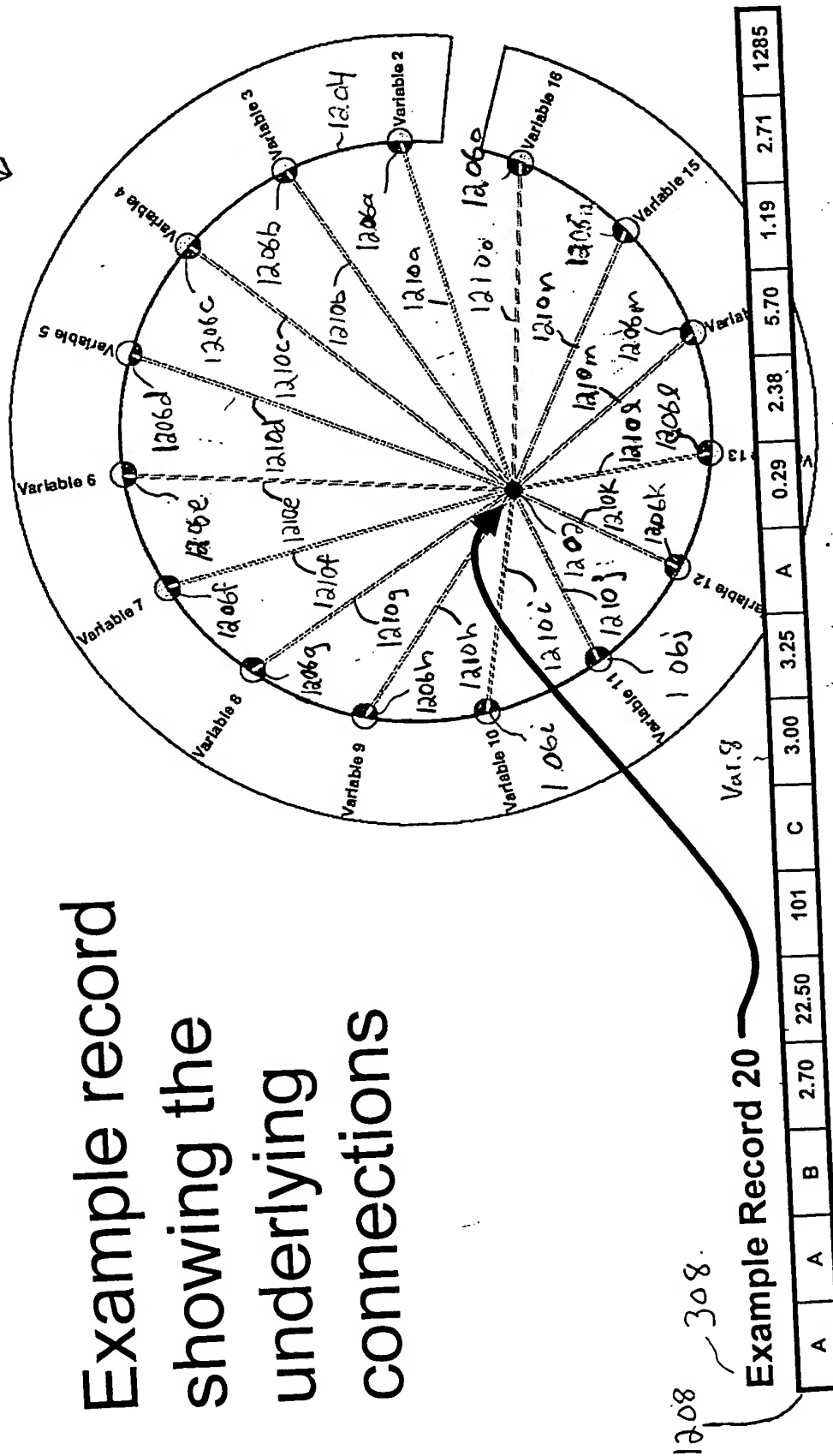


Figure 12A

205T20-1694200T

1200
2

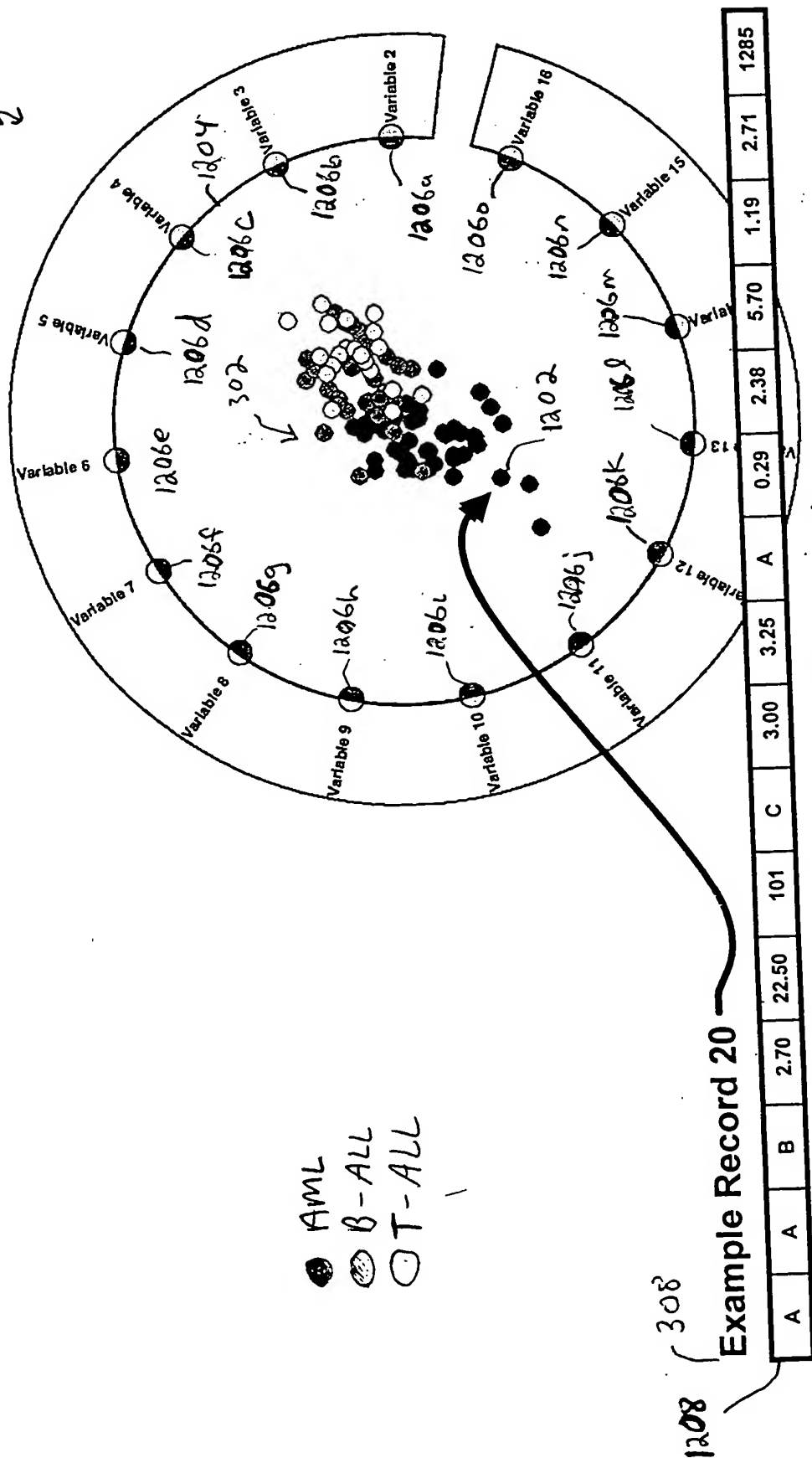
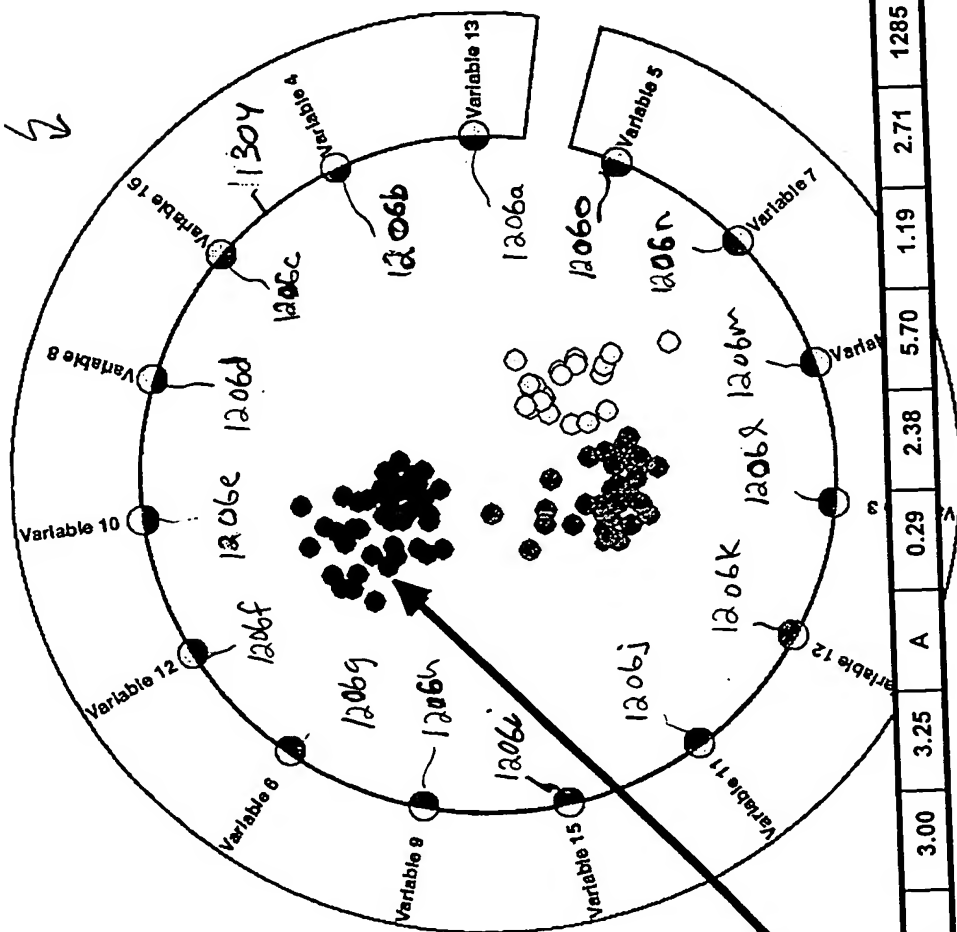


Figure 12B

2259888

Visual Classifier

1200



Three Classes

- AML
- B-ALL
- T-ALL

308

Example Record 20

A	A	B	2.70	22.50	101	C	3.00	3.25	A	0.29	2.38	5.70	1.19	2.71	1285
---	---	---	------	-------	-----	---	------	------	---	------	------	------	------	------	------

1208

Figure 12C

2259888

205120-10524001

1300

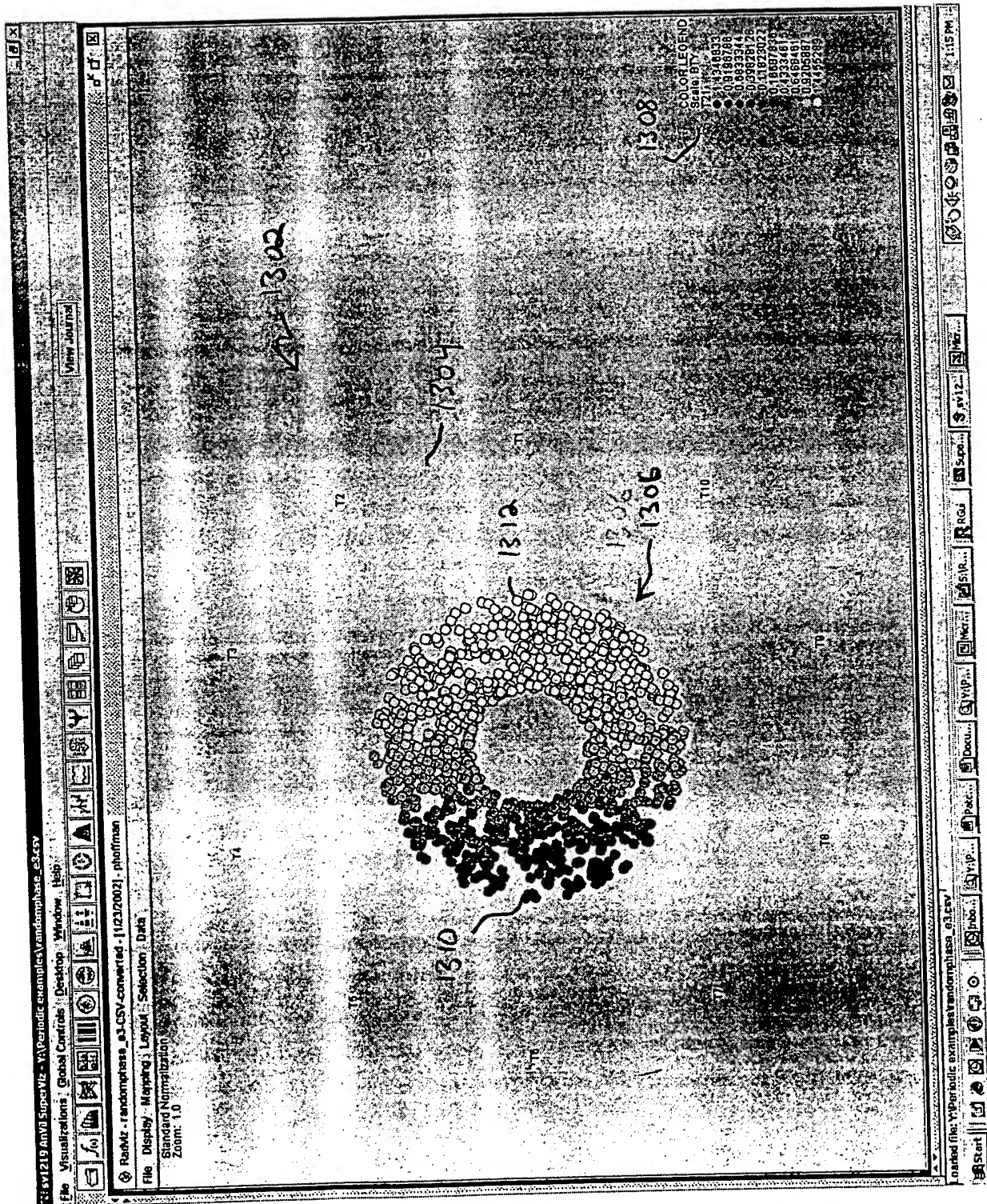


Figure 13A

226937

205120-7692001

1301

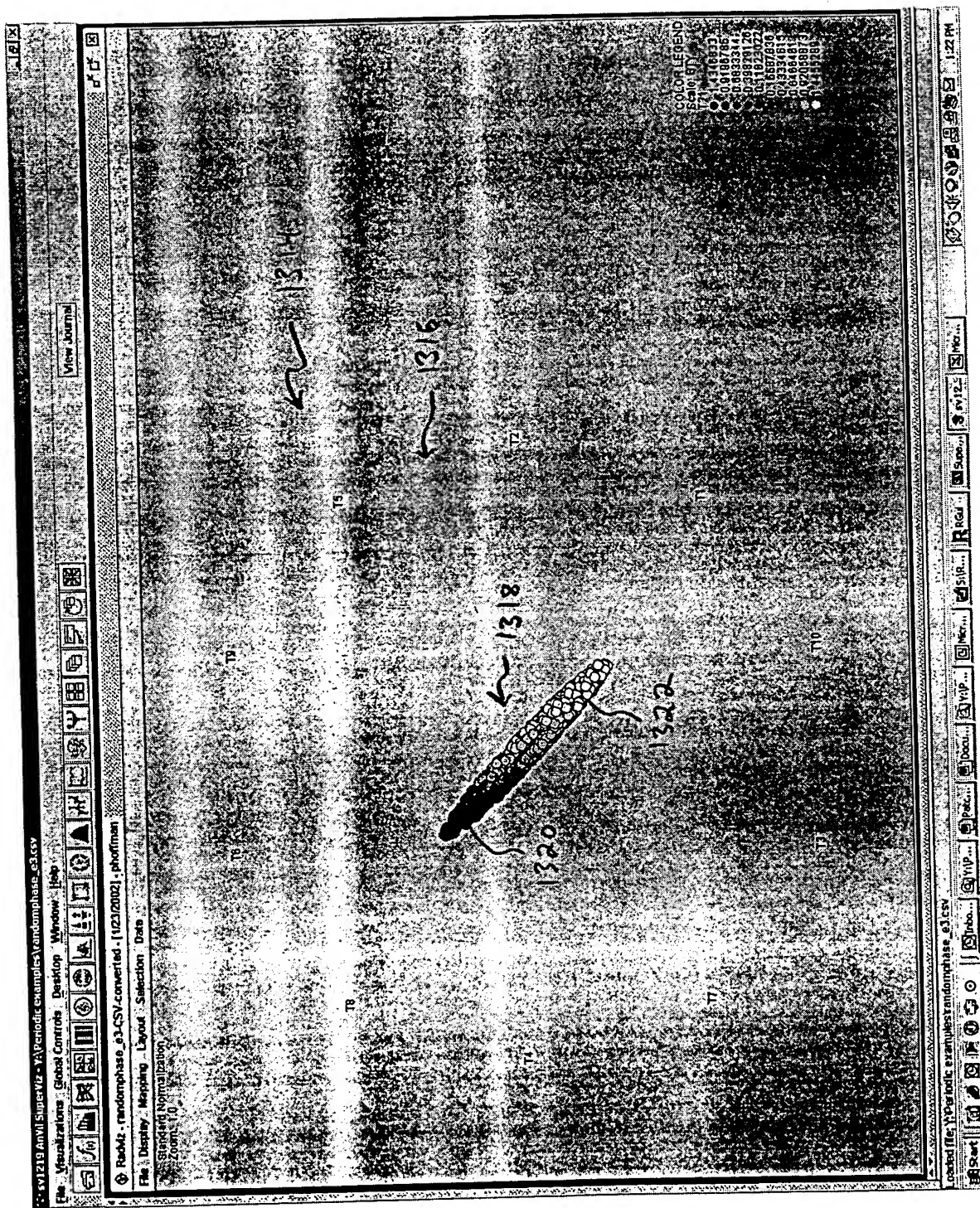


Figure 13B

2269307

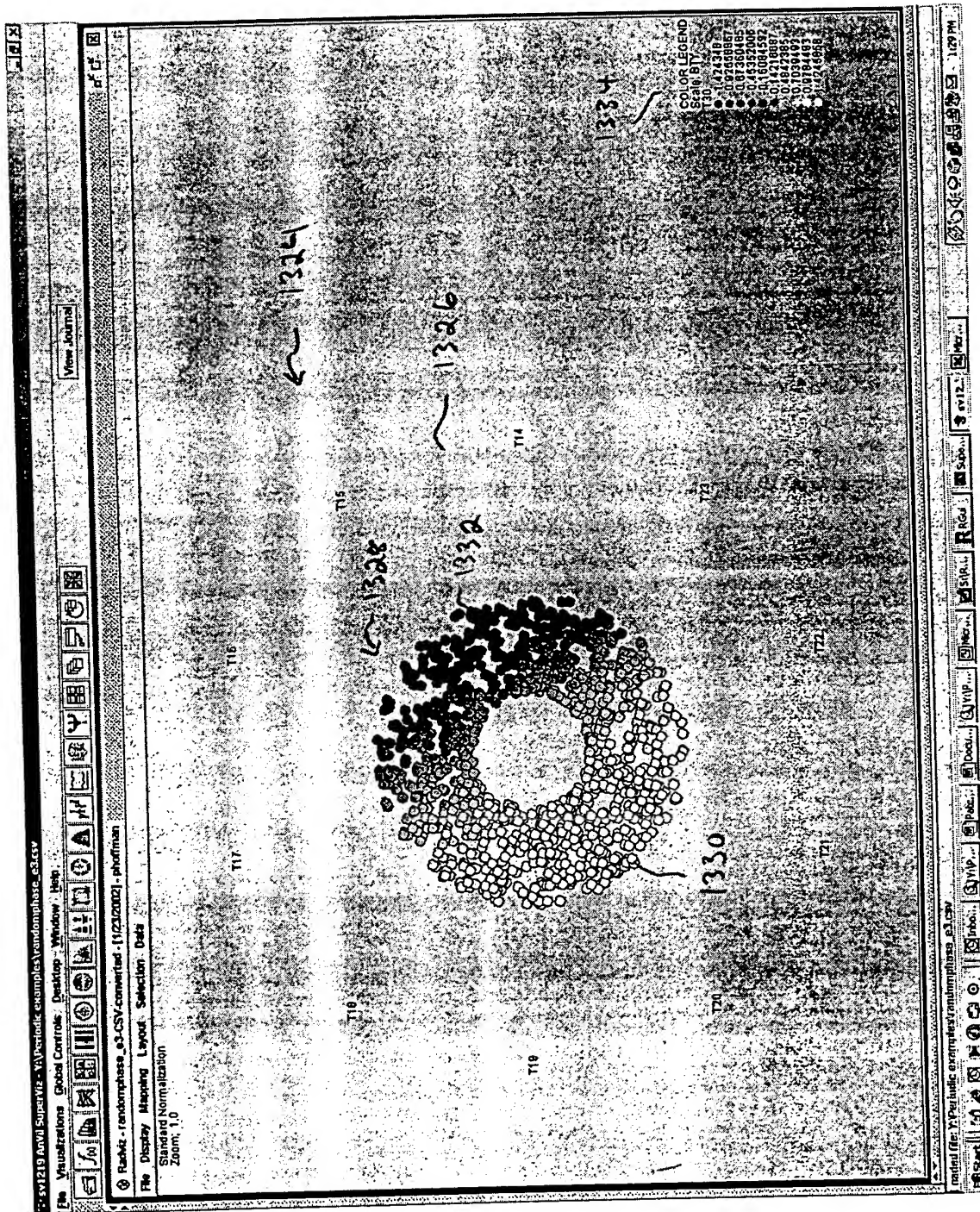


Figure 13C



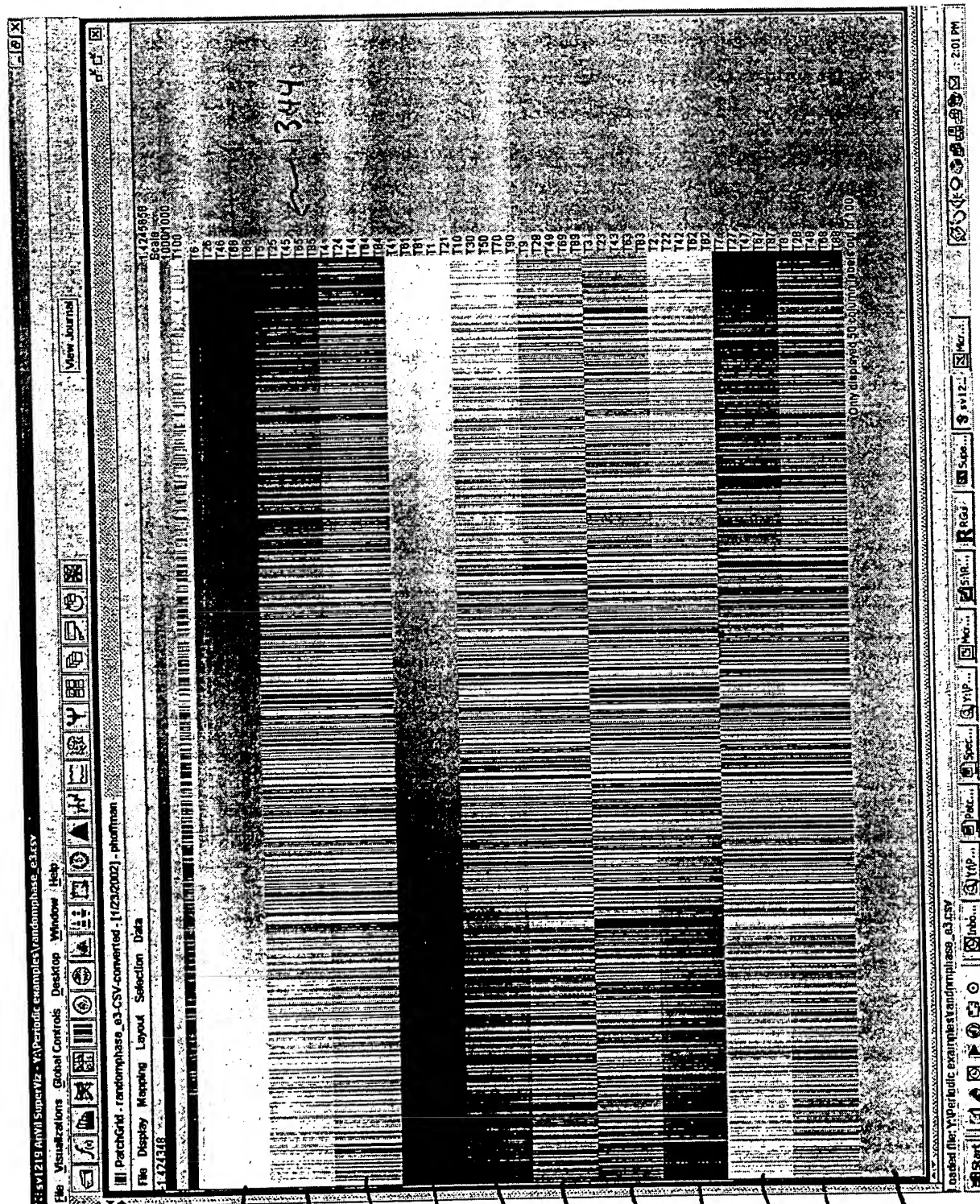
Title: Method And System For Data Analysis
Inventor(s): Gee et al.
Serial No. Not yet assigned
Docket No. ANV-001
Contact: John V. Bianco 617-248-7870
Express Mail Label No. EV012824282US **Sheet 37 of 79**

Figure 13E

226437

205120" 4694.0001

226937



1346a

1346b

1346c

1346d

1346e

1346f

1346g

1346h

1346i

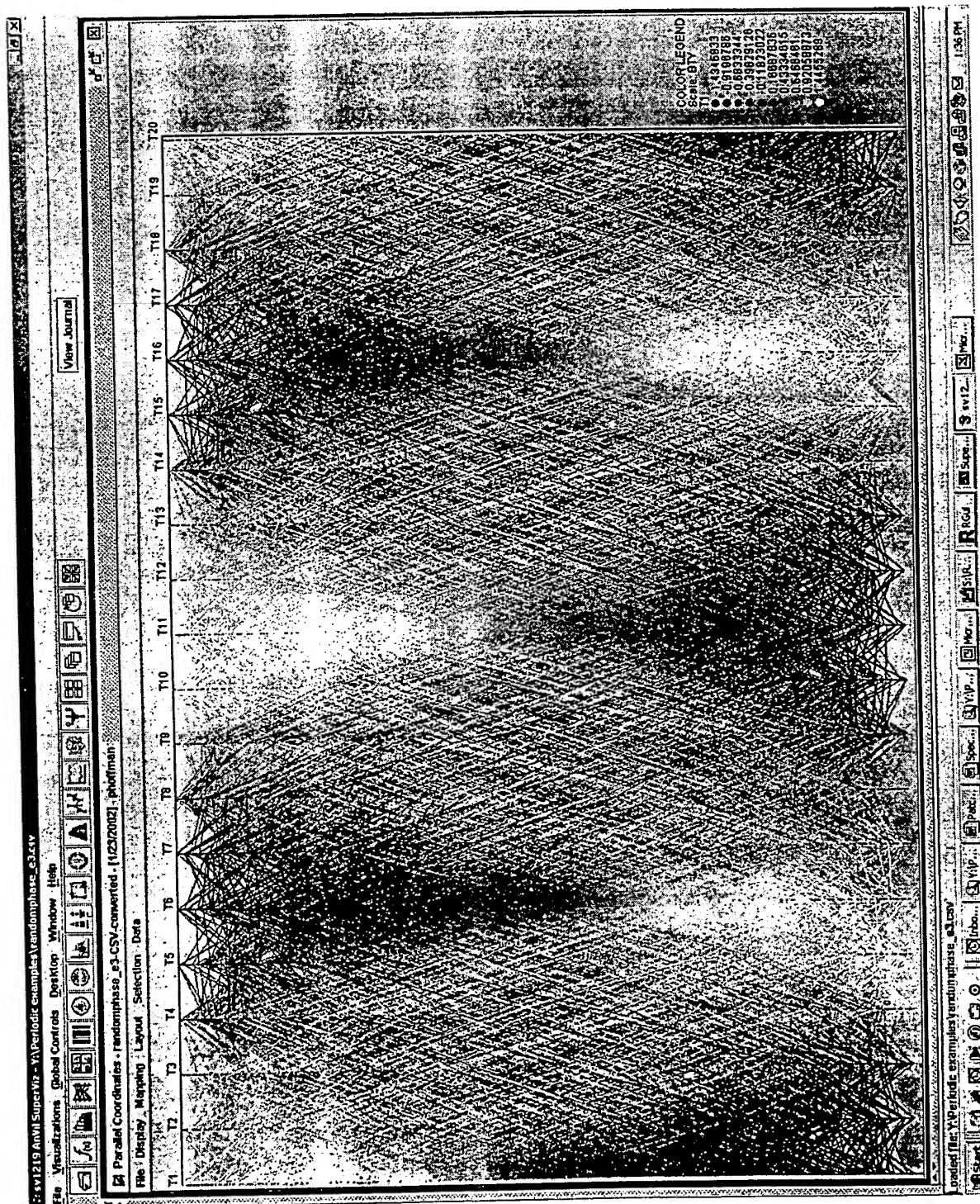
1346j

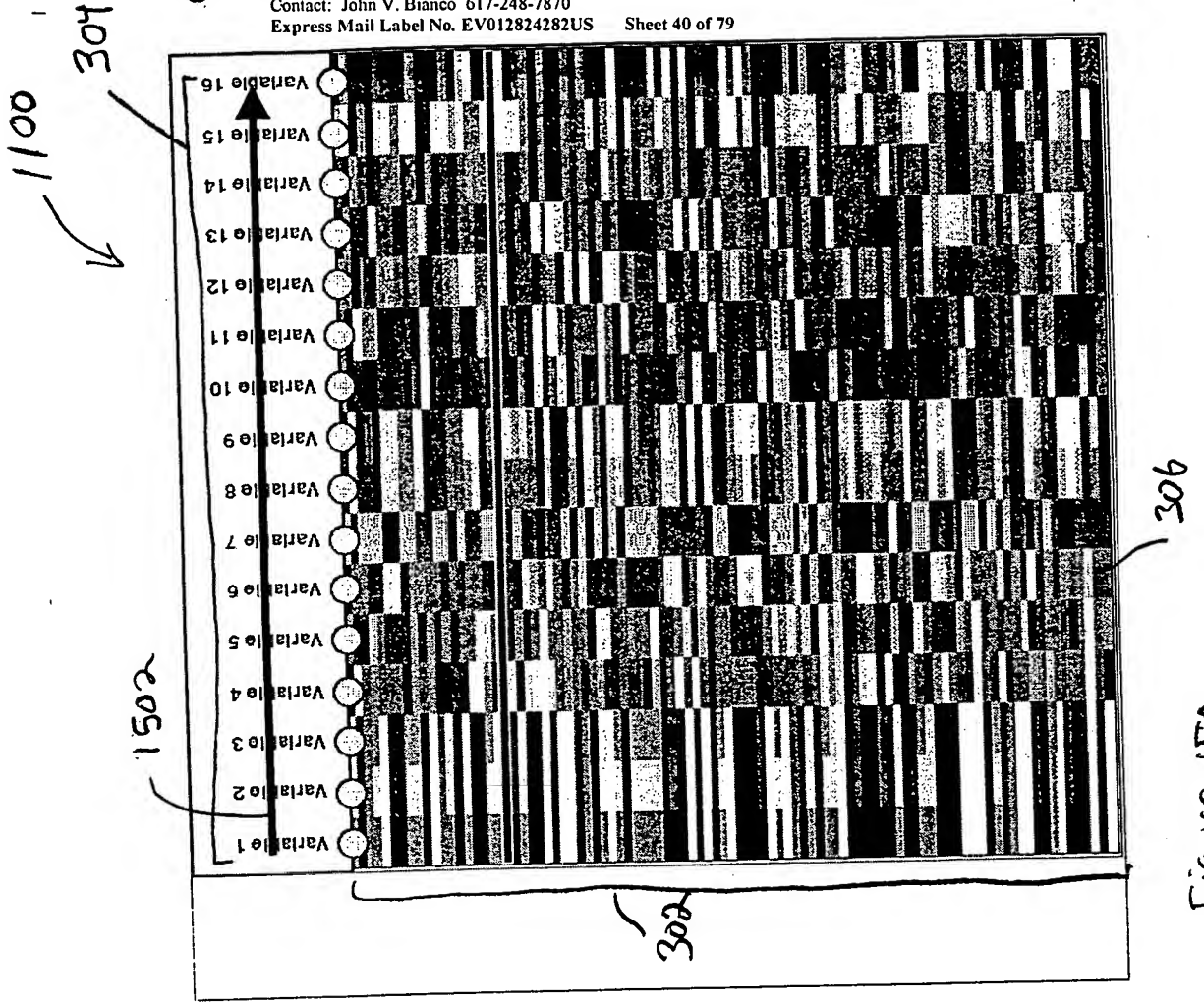
1346k

Figure 13f

Title: Method And System For Data Analysis
Inventor(s): Gee et al.
Serial No. Not yet assigned
Docket No. ANV-001
Contact: John V. Bianco 617-248-7870
Express Mail Label No. EV012824282US **Sheet 39 of 79**

Figure 13G





Transforming a
 rectangular to a
 radial layout

Figure 15A

205120-46922001

07C9998

Radial Layout

Transforming a
 rectangular to a
 radial layout

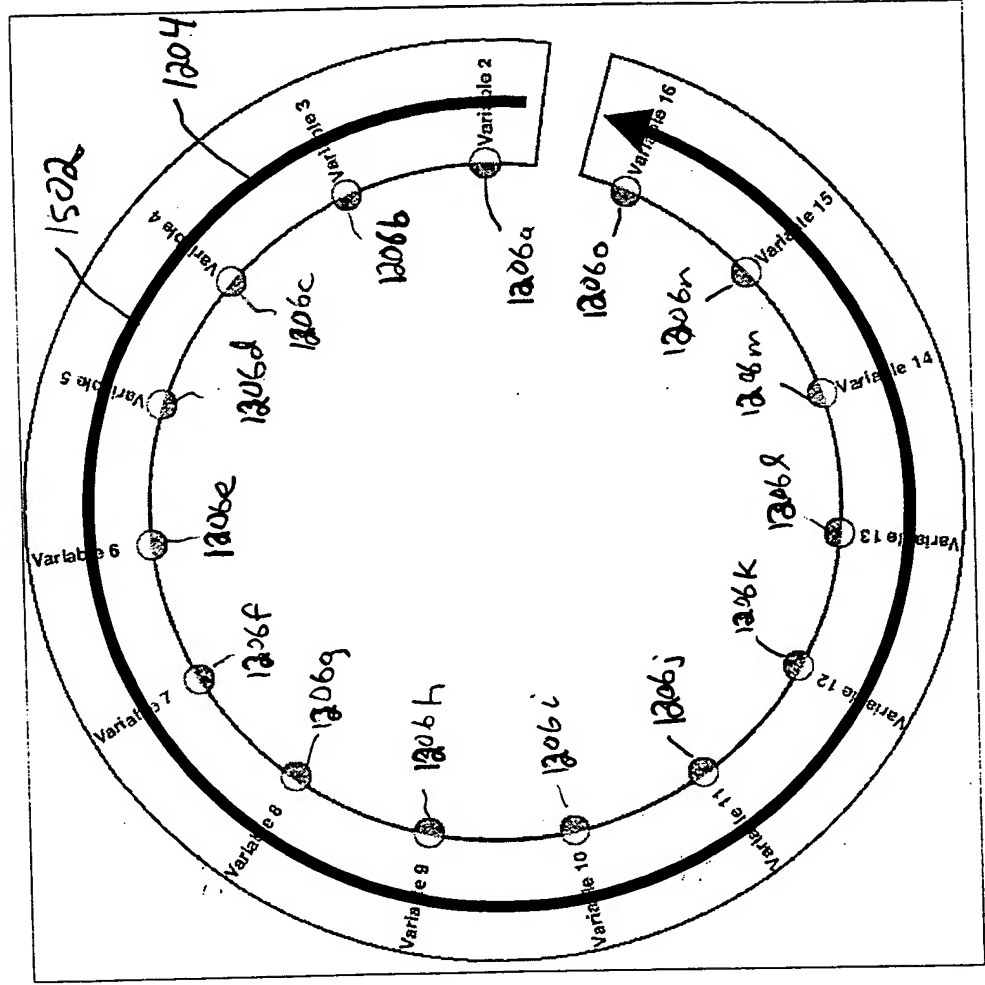


Figure 150

205420-169400F

Radial Layout

Transforming a
rectangular to a
radial layout

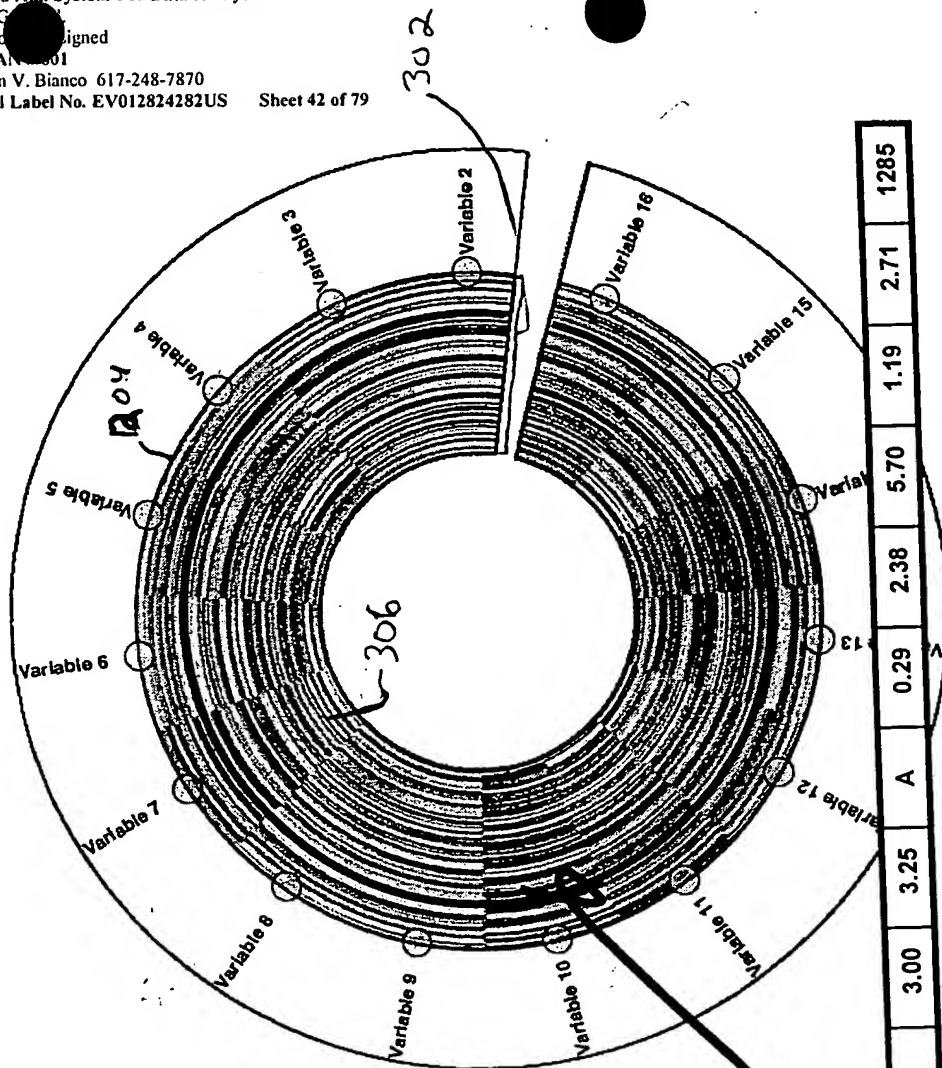


Figure 15c

308

Example Record 20

1208

2220000

Shape Control – Before Moving Anchors

1506
Exons
Introns



1504

1500

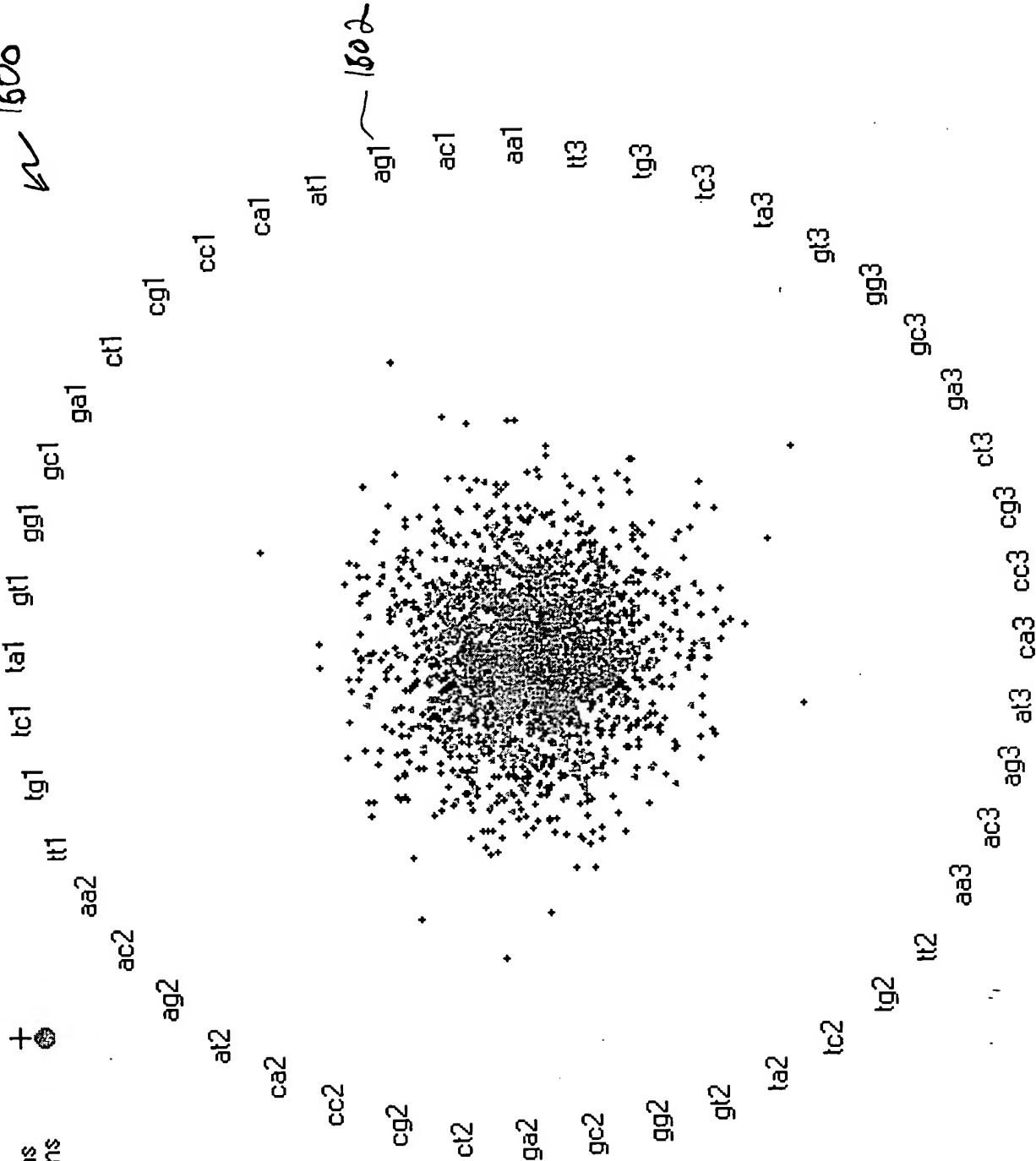
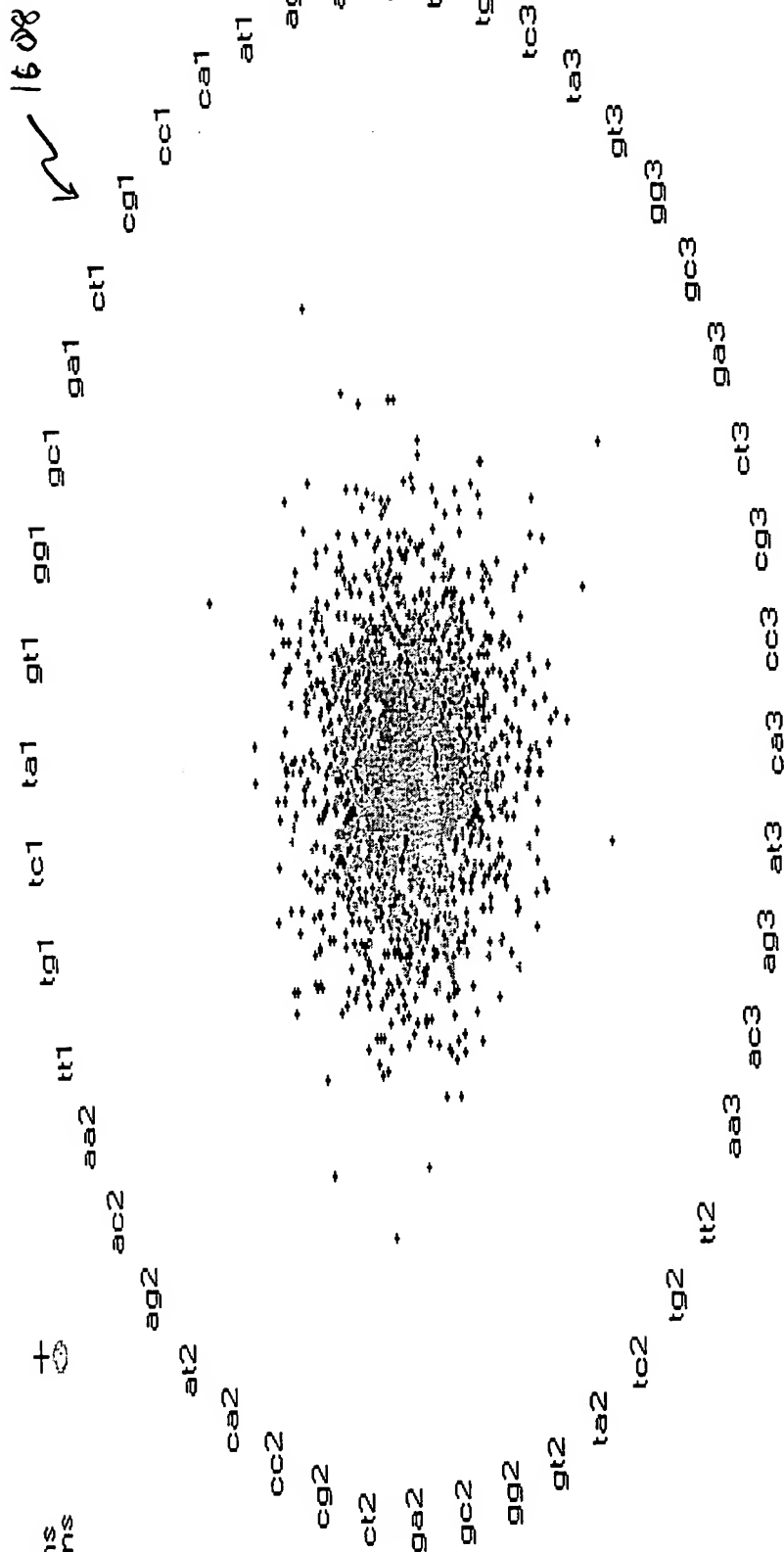


Figure 16A

THE
CITY
OF
NEW
YORK
OFFICE
OF
THE
COMPTROLLER
OF
THE
CITY
OF
NEW
YORK
OFFICE
OF
THE
COMPTROLLER
OF
THE
CITY
OF
NEW
YORK

Exons
Introns

boy



Title: Method And System For Error Analysis
Inventor(s): Gee et al.
Serial No. Not yet assigned
Docket No. ANV-001
Contact: John V. Bianco 617-248-7870
Express Mail Label No. EV012824282US

Figure 16B

2218917

Shape Control - Arbitrary Spline

1606 Exons
1604 Introns

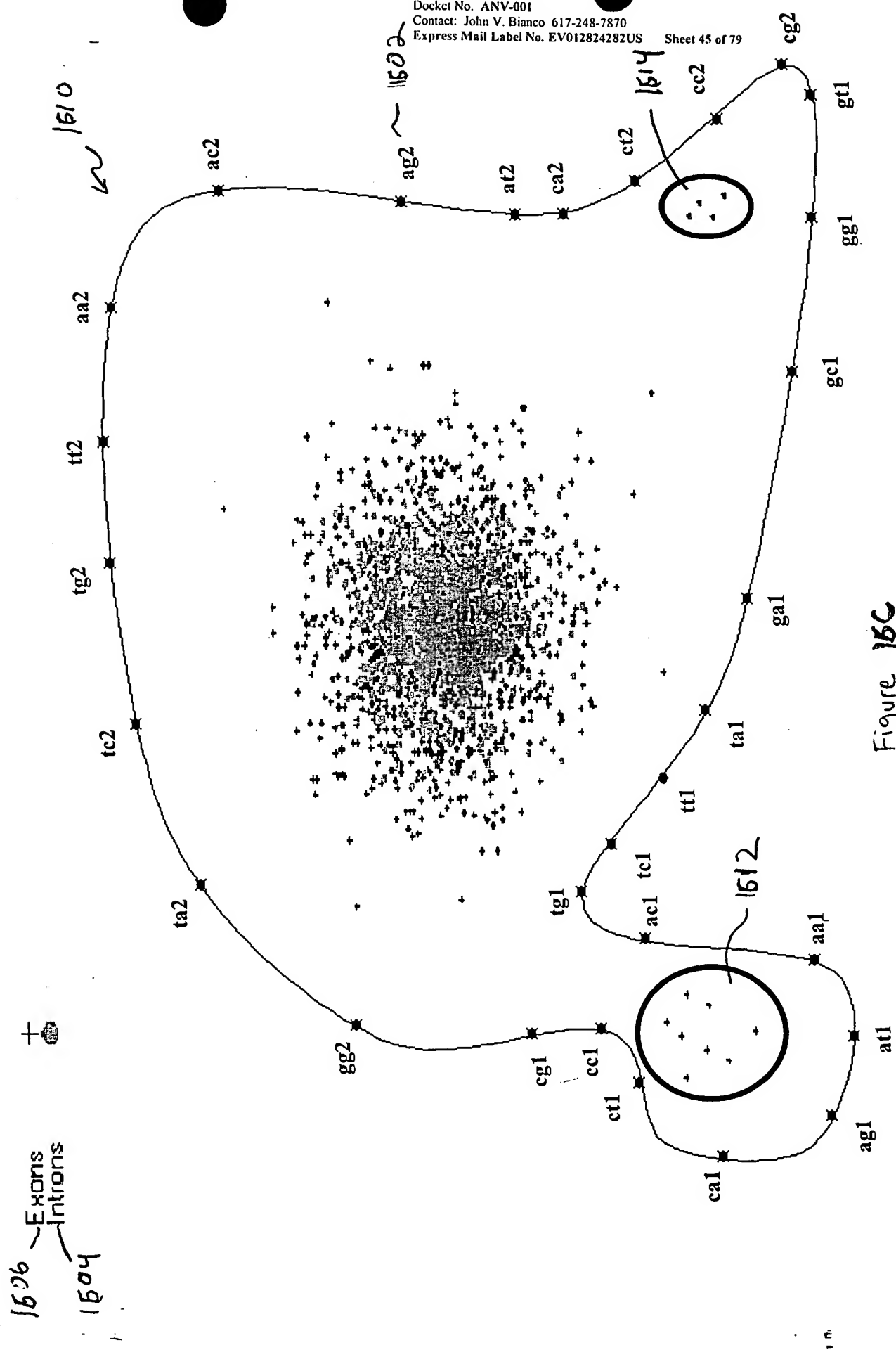


Figure 16C

2025120-1694001

1620

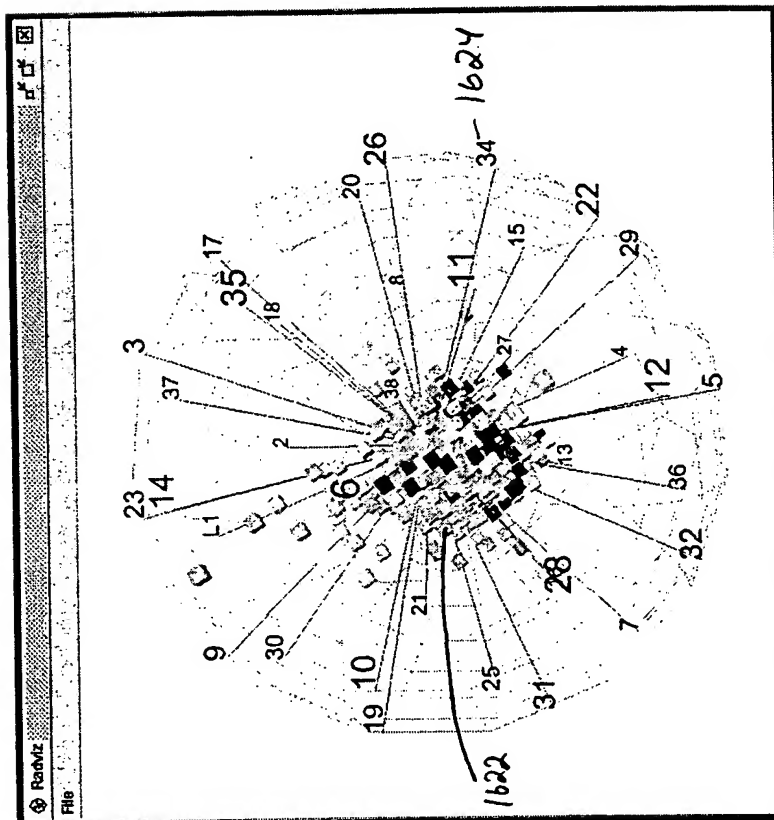
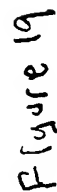


Fig. 16D



2174266



1704r 8002 10077692001

2002

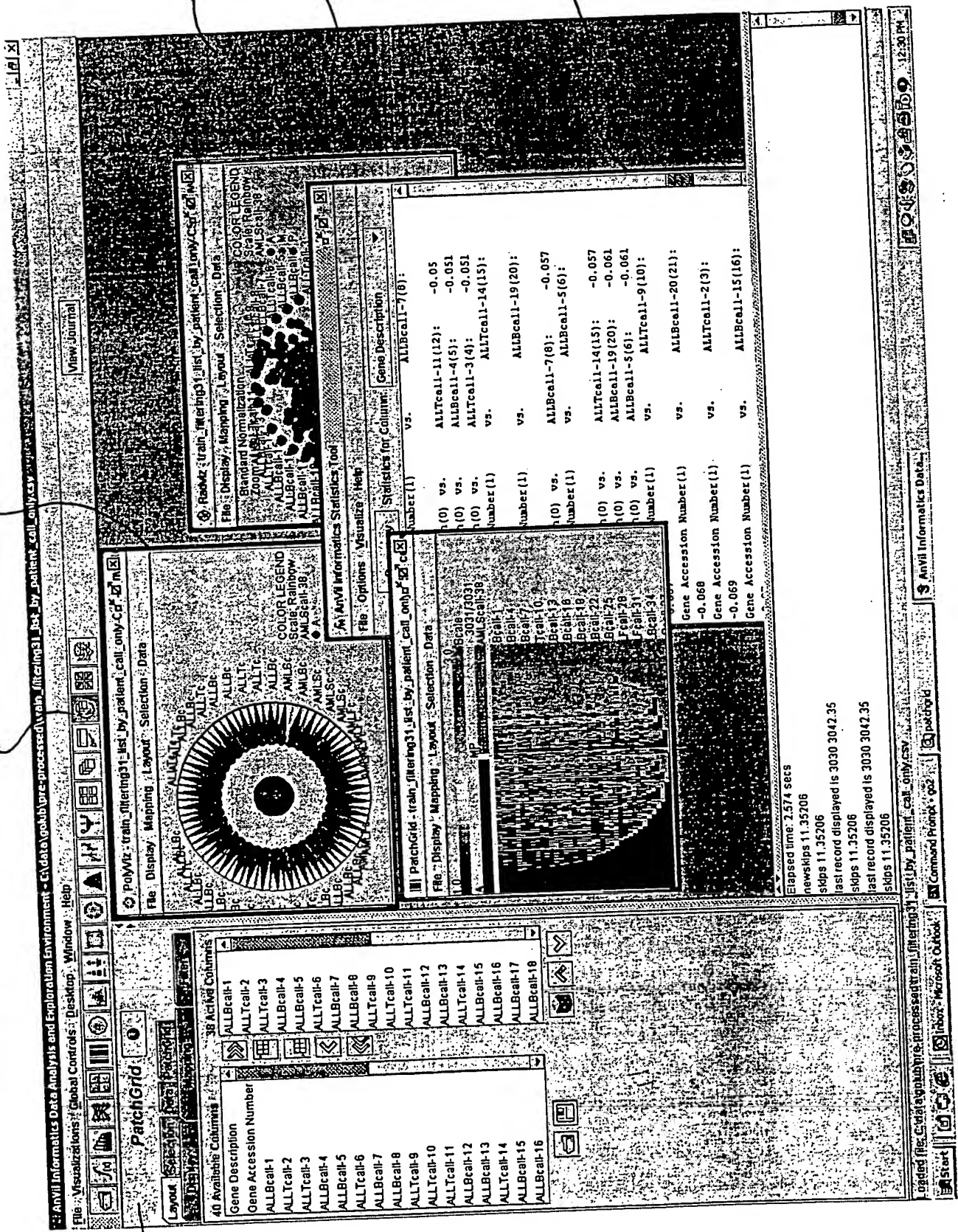
1708

17061

2006

2002

Figure 20



2174305

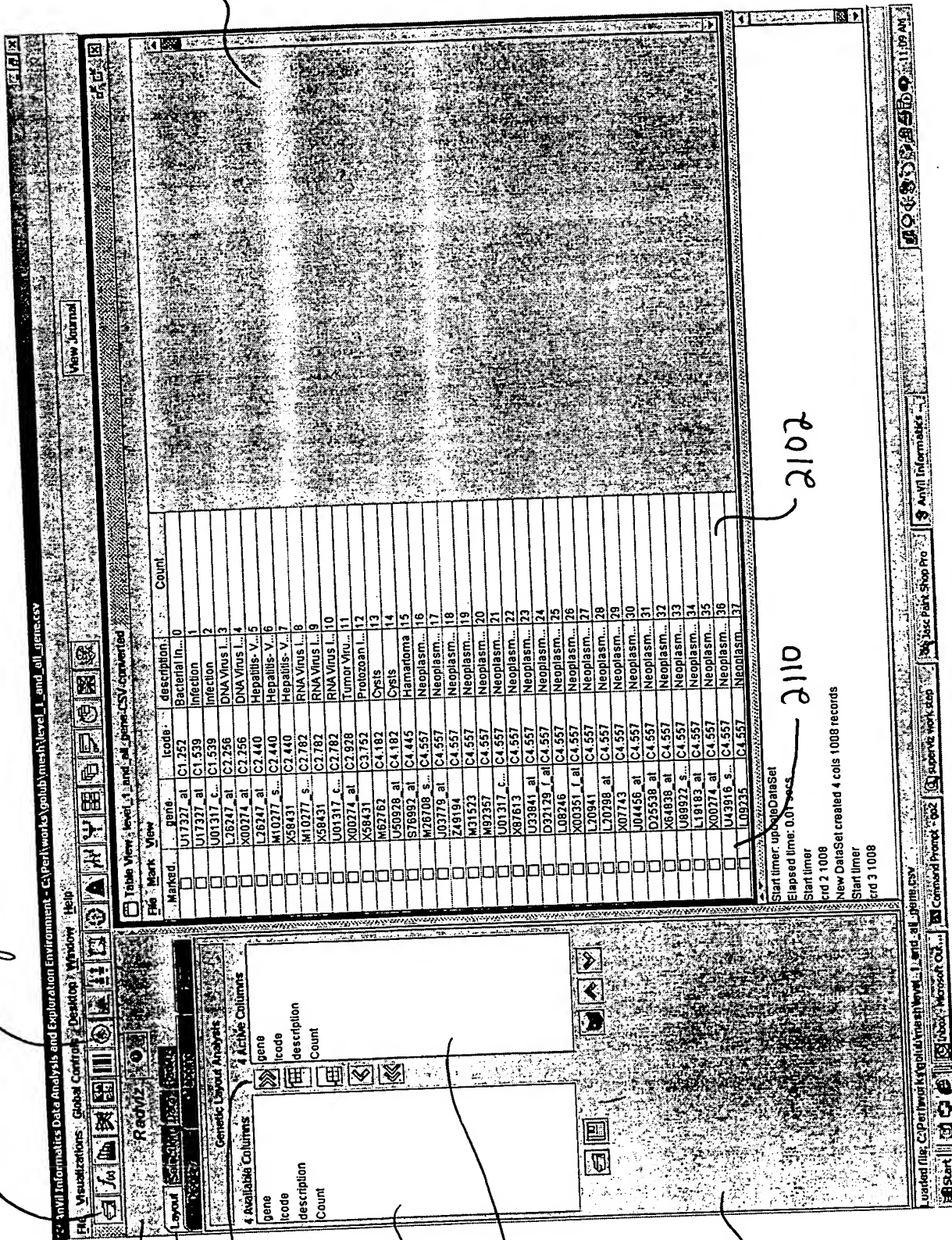
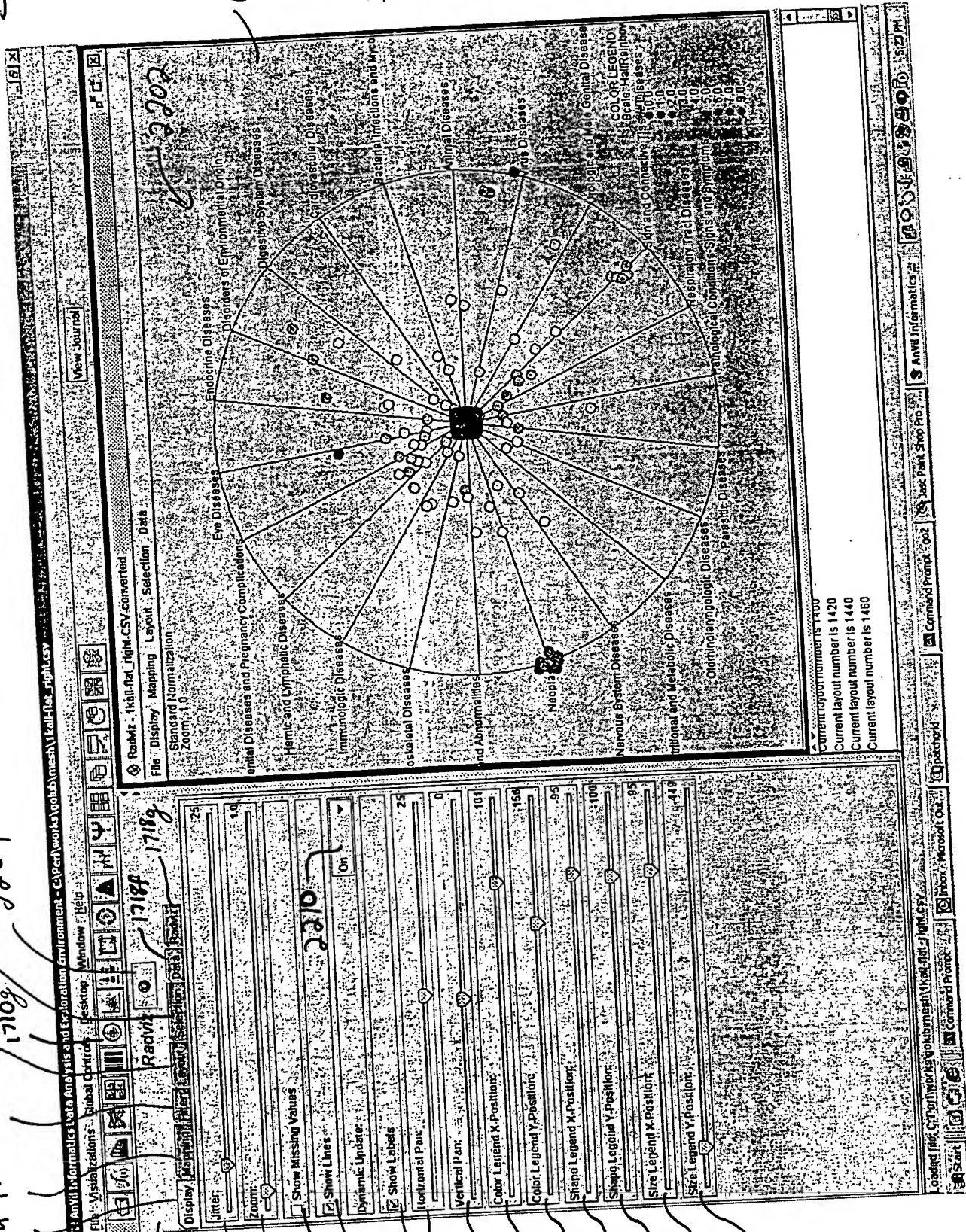


Figure 21

221891

Figure 22



1718a 1718b 1718c 1718d 1718e
 1718f 1718g 1718h 1718i 1718j

2202

1706

1708

1718

2206a

2206b

2208a

2208b

2208c

2208d

2208e

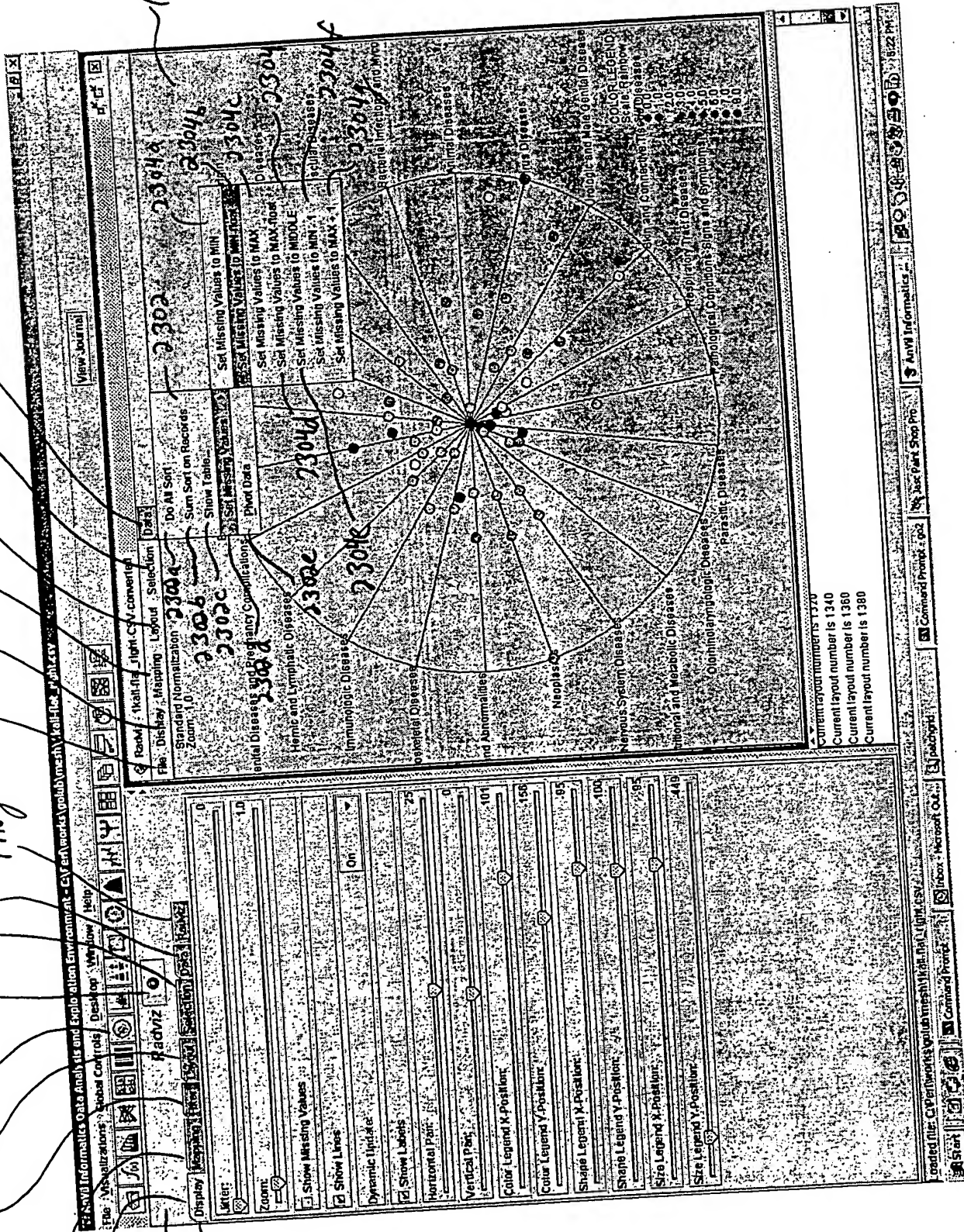
2208f

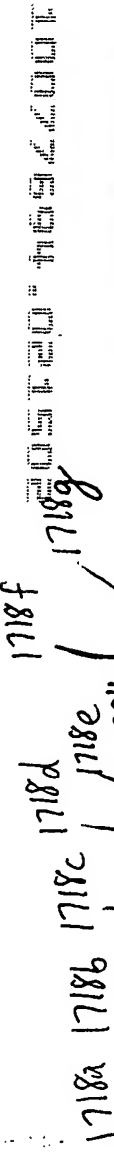
2208g

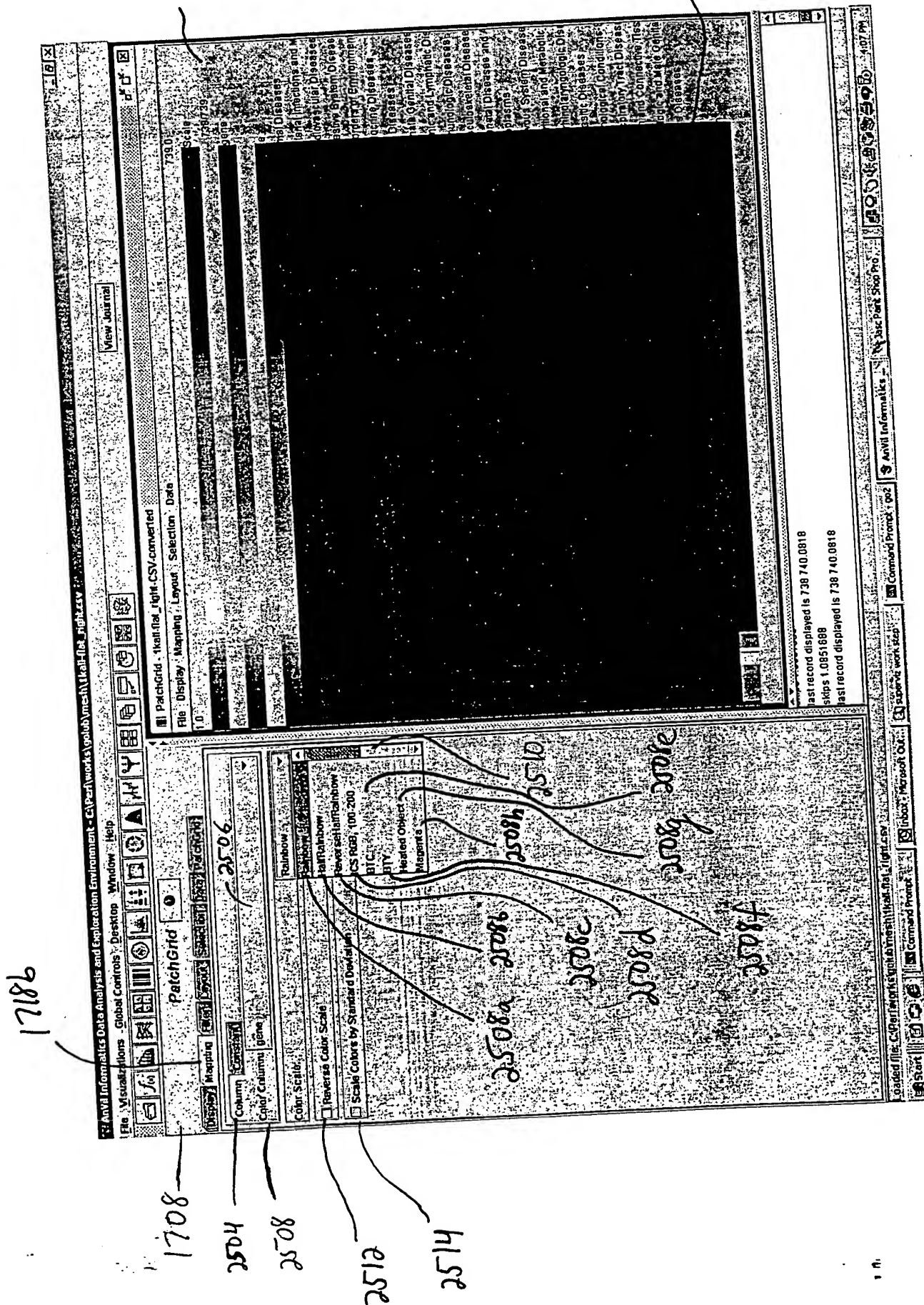
2208h

2208i

2208j







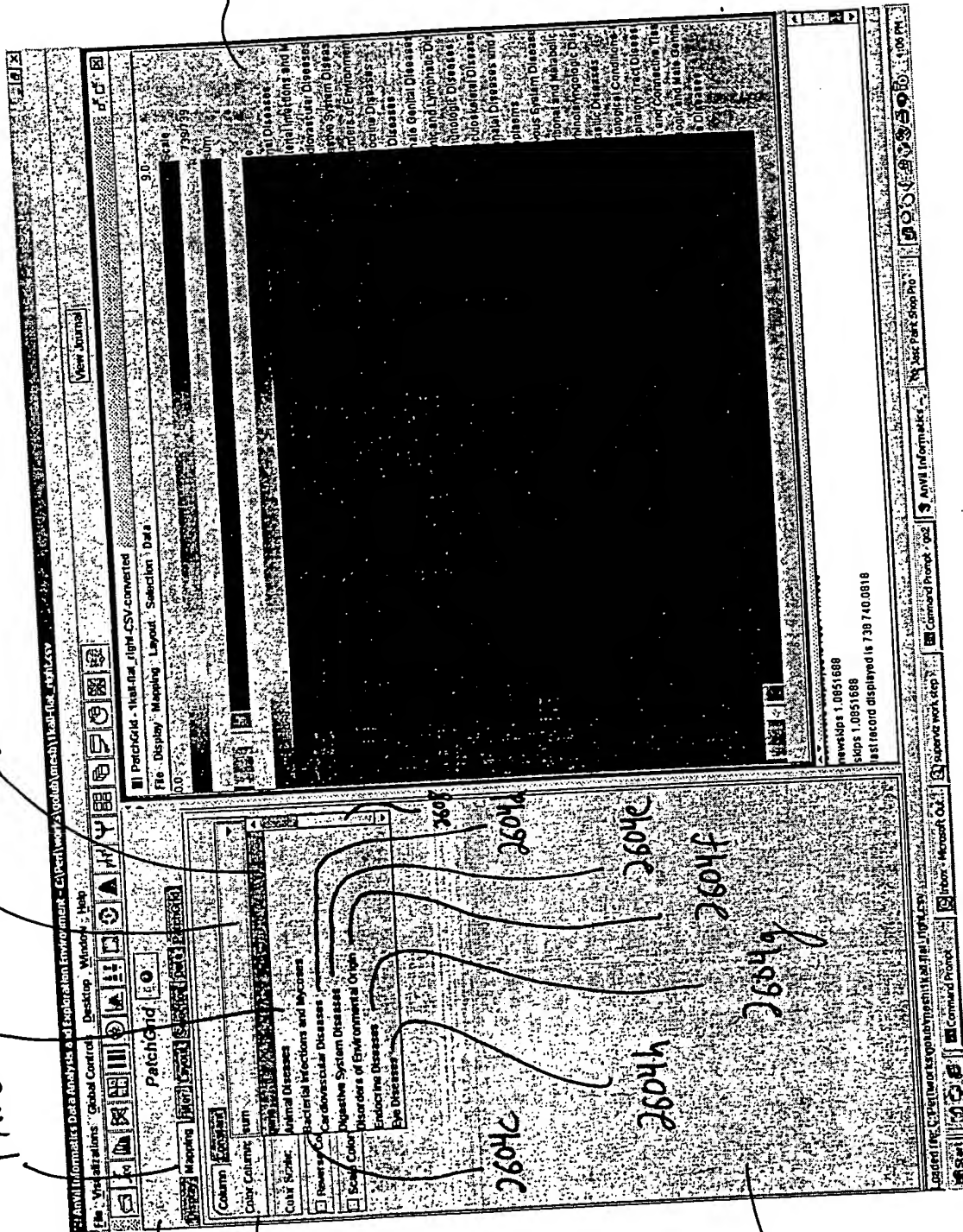


Figure 26

2218917

205100-14692001

2702

2702a

1718c

1708

2702c

2704

2706

2708

2710

1706

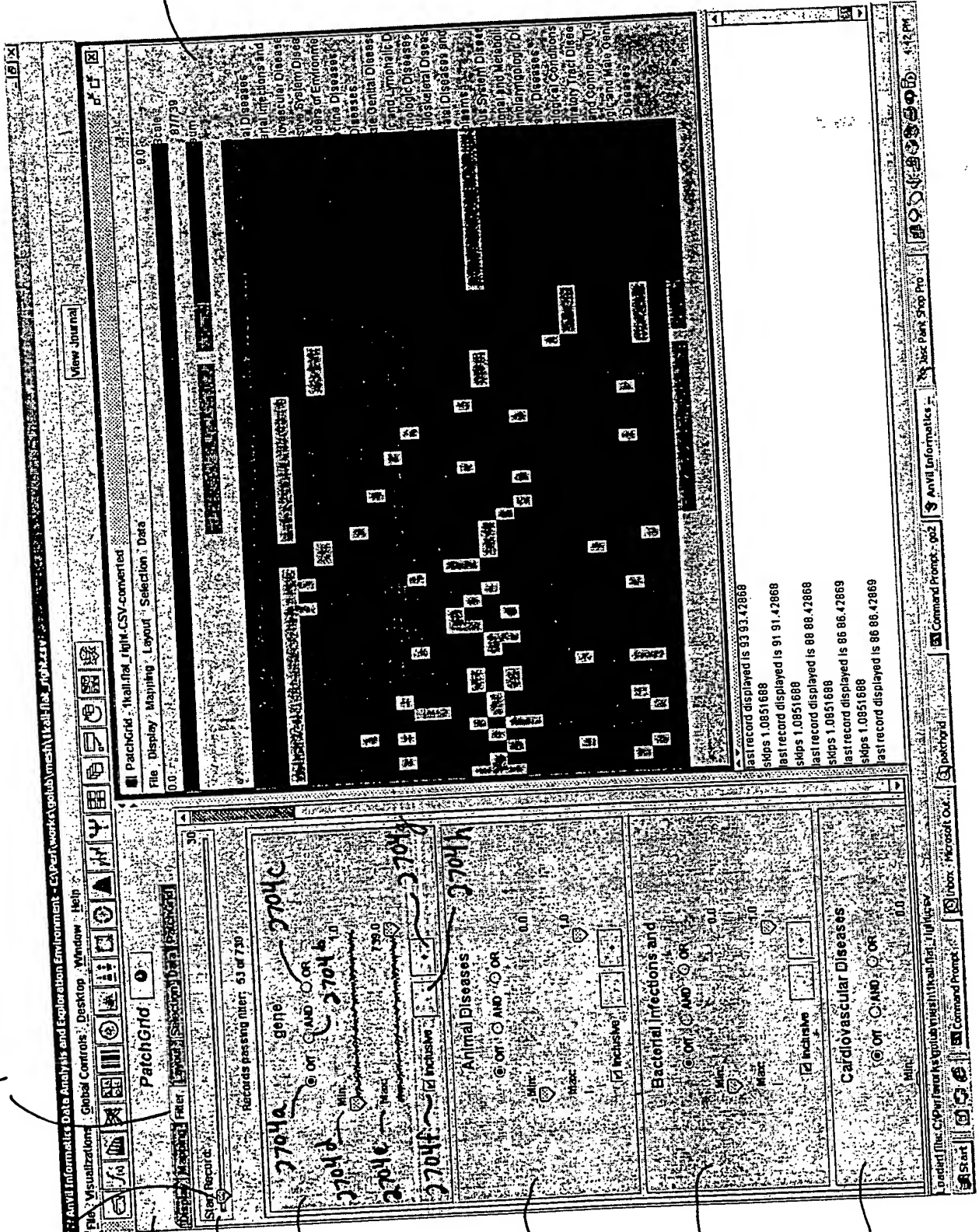


Figure 27

2218917

2800

1706

221891

2005.12.01 16:54:00

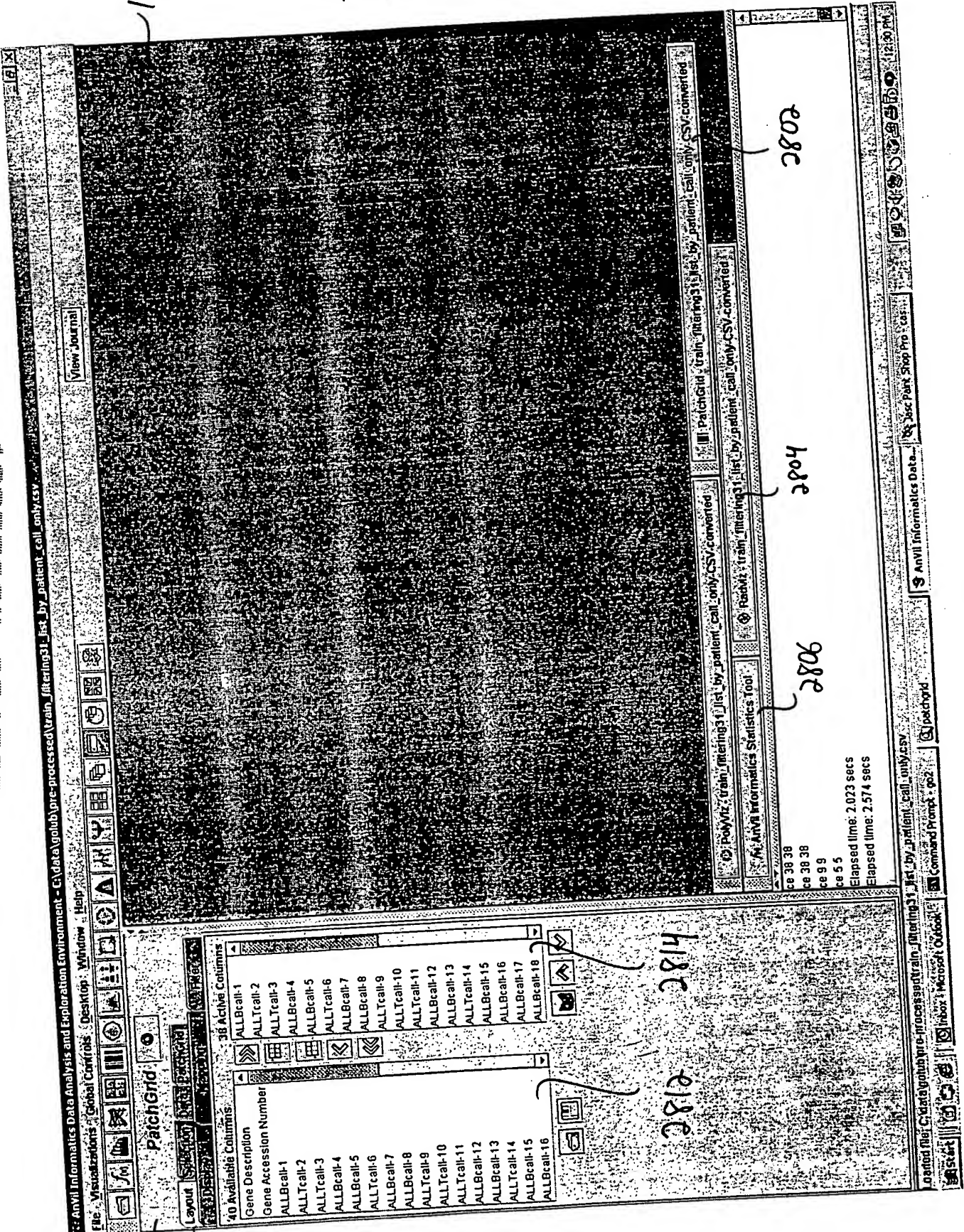


Figure 28

Sheet 59 of 79

Figure 29

ANVI Informatics Data Analysis and Exploration Environment - C:\Perl\works\glob\mesh\kall\flat_right.csv

File Explorer (Left):

- 1708
- 2900a
- 2900b
- 2900c
- 2900d
- 2900e
- 2900f
- 2900g
- 2900h
- 2900i
- 2900j
- 2900k
- 2900l
- 2900m
- 2900n
- 2900o
- 2900p
- 2900q
- 2900r
- 2900s
- 2900t
- 2900u
- 2900v
- 2900w
- 2900x
- 2900y
- 2900z
- 2901a
- 2901b
- 2901c
- 2901d
- 2901e
- 2901f
- 2901g
- 2901h
- 2901i
- 2901j
- 2901k
- 2901l
- 2901m
- 2901n
- 2901o
- 2901p
- 2901q
- 2901r
- 2901s
- 2901t
- 2901u
- 2901v
- 2901w
- 2901x
- 2901y
- 2901z
- 2902a
- 2902b
- 2902c
- 2902d
- 2902e
- 2902f
- 2902g
- 2902h
- 2902i
- 2902j
- 2902k
- 2902l
- 2902m
- 2902n
- 2902o
- 2902p
- 2902q
- 2902r
- 2902s
- 2902t
- 2902u
- 2902v
- 2902w
- 2902x
- 2902y
- 2902z
- 2903a
- 2903b
- 2903c
- 2903d
- 2903e
- 2903f
- 2903g
- 2903h
- 2903i
- 2903j
- 2903k
- 2903l
- 2903m
- 2903n
- 2903o
- 2903p
- 2903q
- 2903r
- 2903s
- 2903t
- 2903u
- 2903v
- 2903w
- 2903x
- 2903y
- 2903z
- 2904a
- 2904b
- 2904c
- 2904d
- 2904e
- 2904f

Central Data Visualization Area:

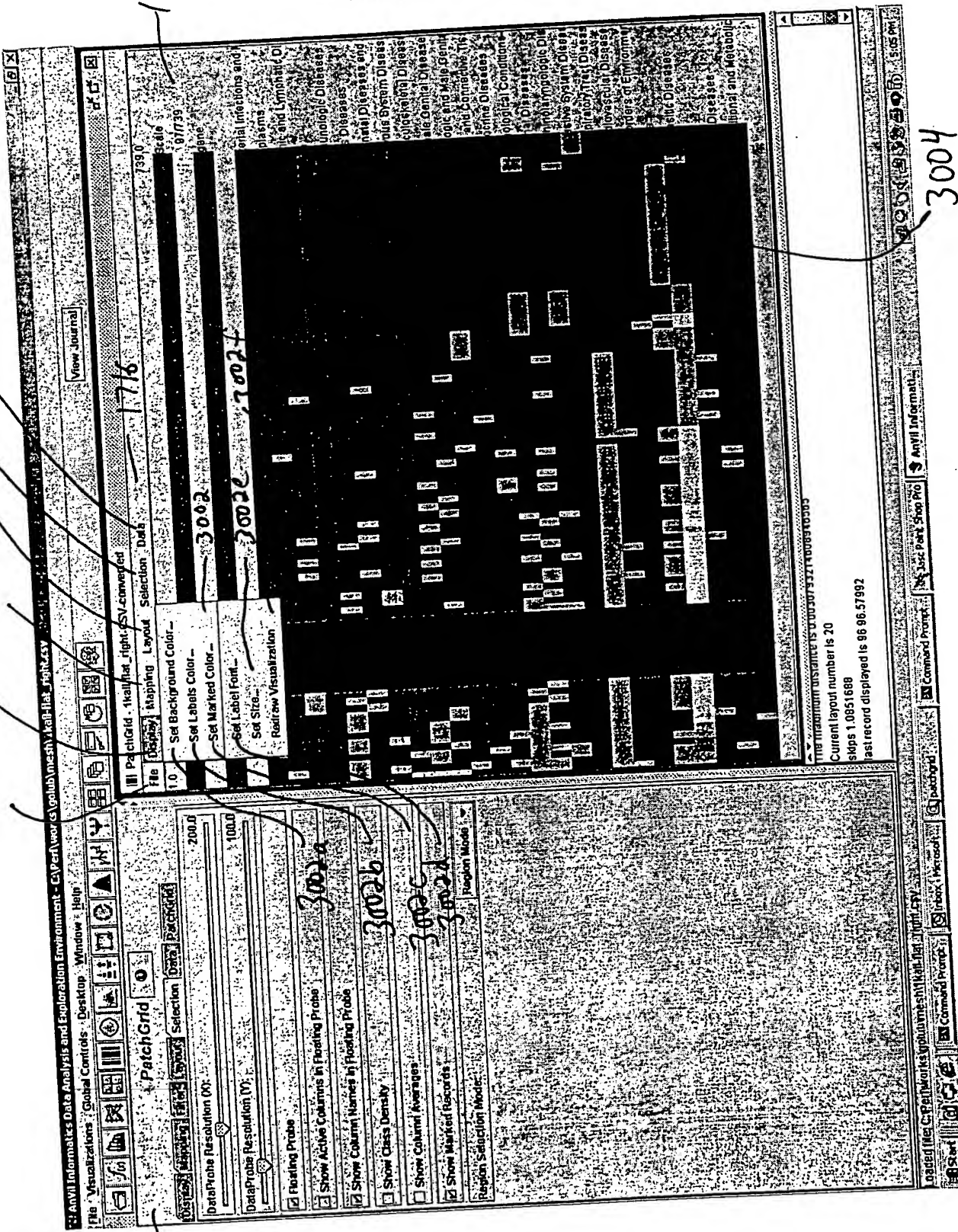
Grid of small plots showing data distributions and trends.

Right Panel (Records and Skip Counts):

- Record 1: 1,085,168
- Record 2: 1,085,168
- Record 3: 1,085,168
- Record 4: 1,085,168
- Record 5: 1,085,168
- Record 6: 1,085,168
- Record 7: 1,085,168
- Record 8: 1,085,168
- Record 9: 1,085,168
- Record 10: 1,085,168
- Record 11: 1,085,168
- Record 12: 1,085,168
- Record 13: 1,085,168
- Record 14: 1,085,168
- Record 15: 1,085,168
- Record 16: 1,085,168
- Record 17: 1,085,168
- Record 18: 1,085,168
- Record 19: 1,085,168
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- Record 99: 1,085,168
- Record 100: 1,085,168

Figure 30

2218917



Sheet 61 of 79

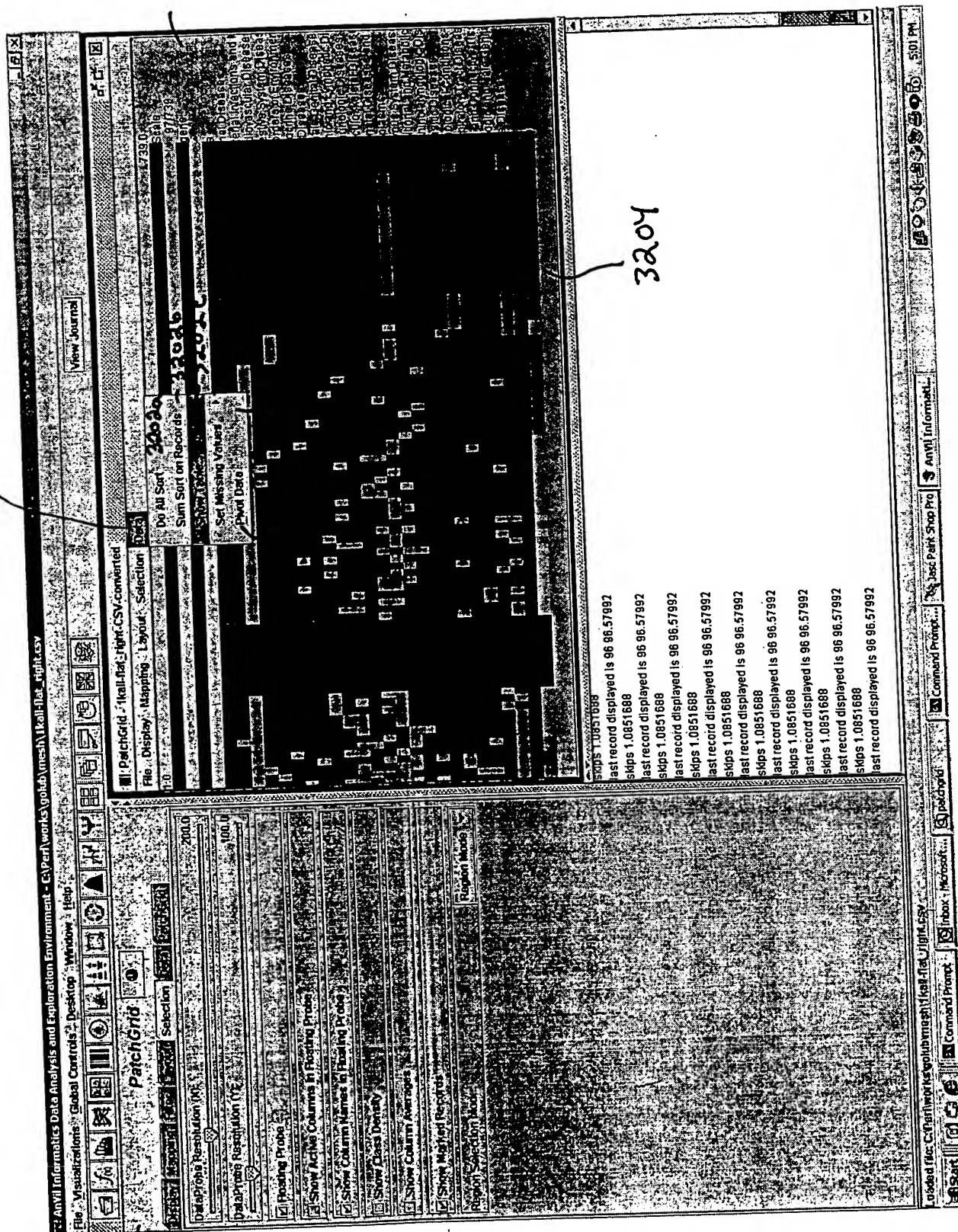
Sheet 61 of 79

Figure 31

3200

205120-1692200716f

1706



3204

Figure 32

1708

Treatment Outcome Prediction

Chemotherapy

- 76 Gene Predictor Set
 - Success
 - Failure
- Boundary

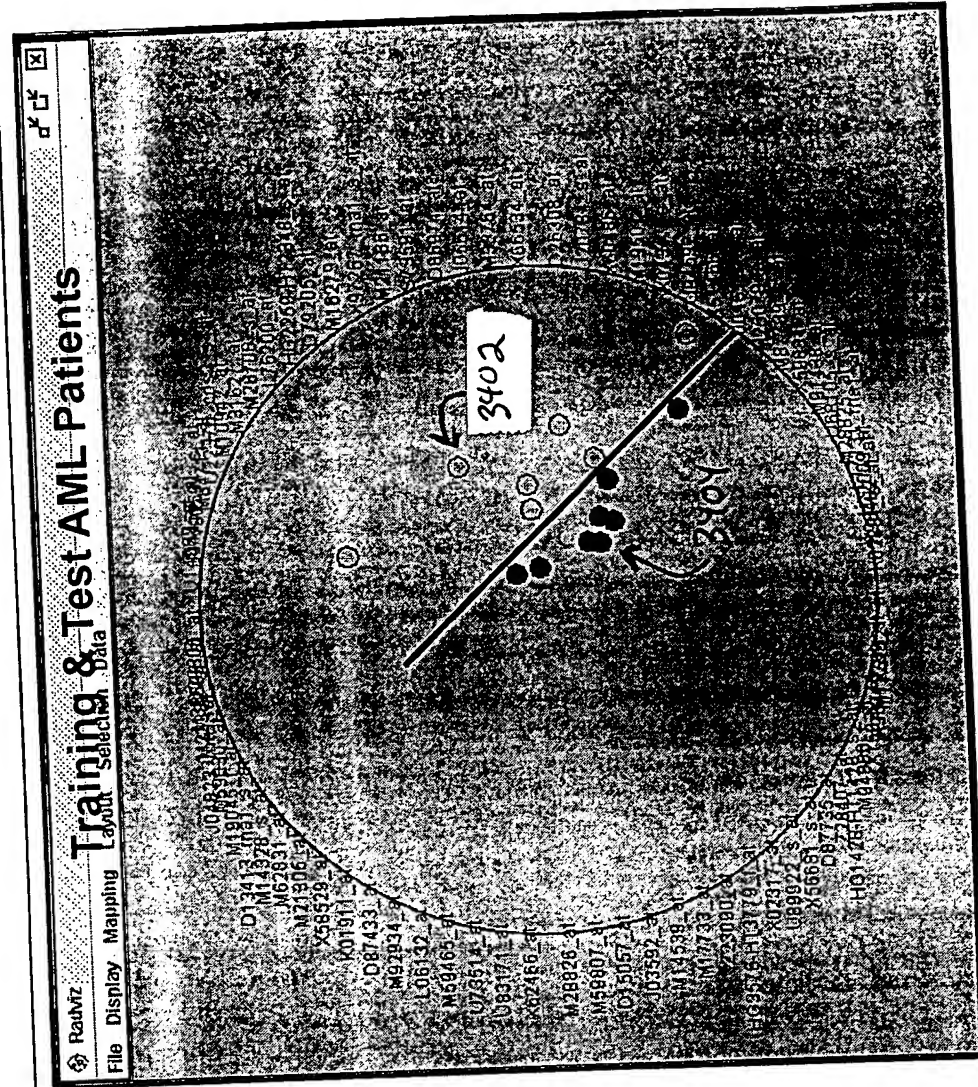


Figure 34

2259884

Reduced Genes

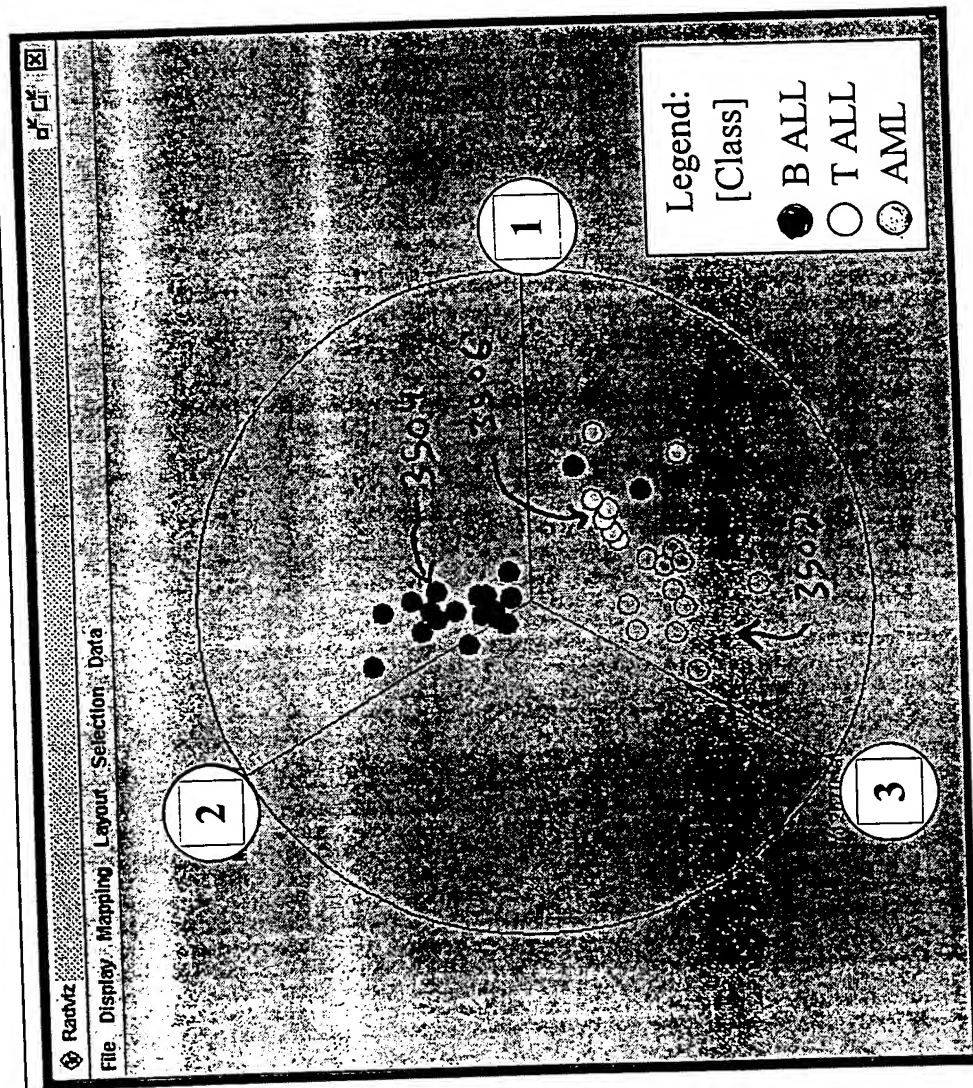


Figure 35

2259884

205420-1592004

Chemical Structure

Benzodiazepines

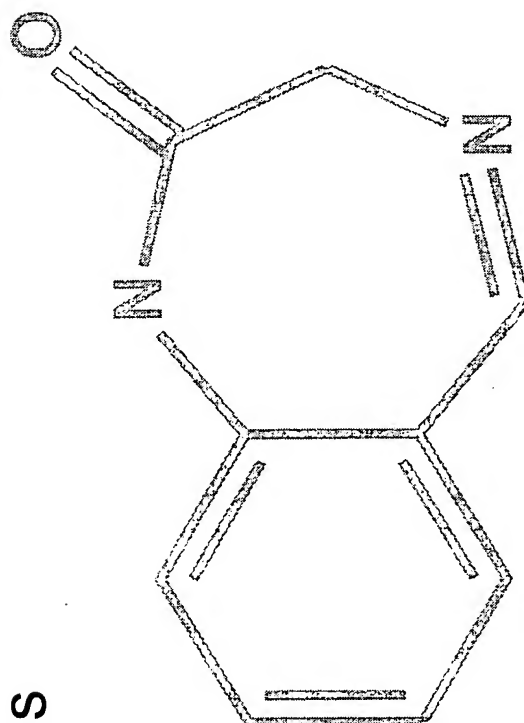


Figure 36

Radial Visualization Showing R₃ Attributes

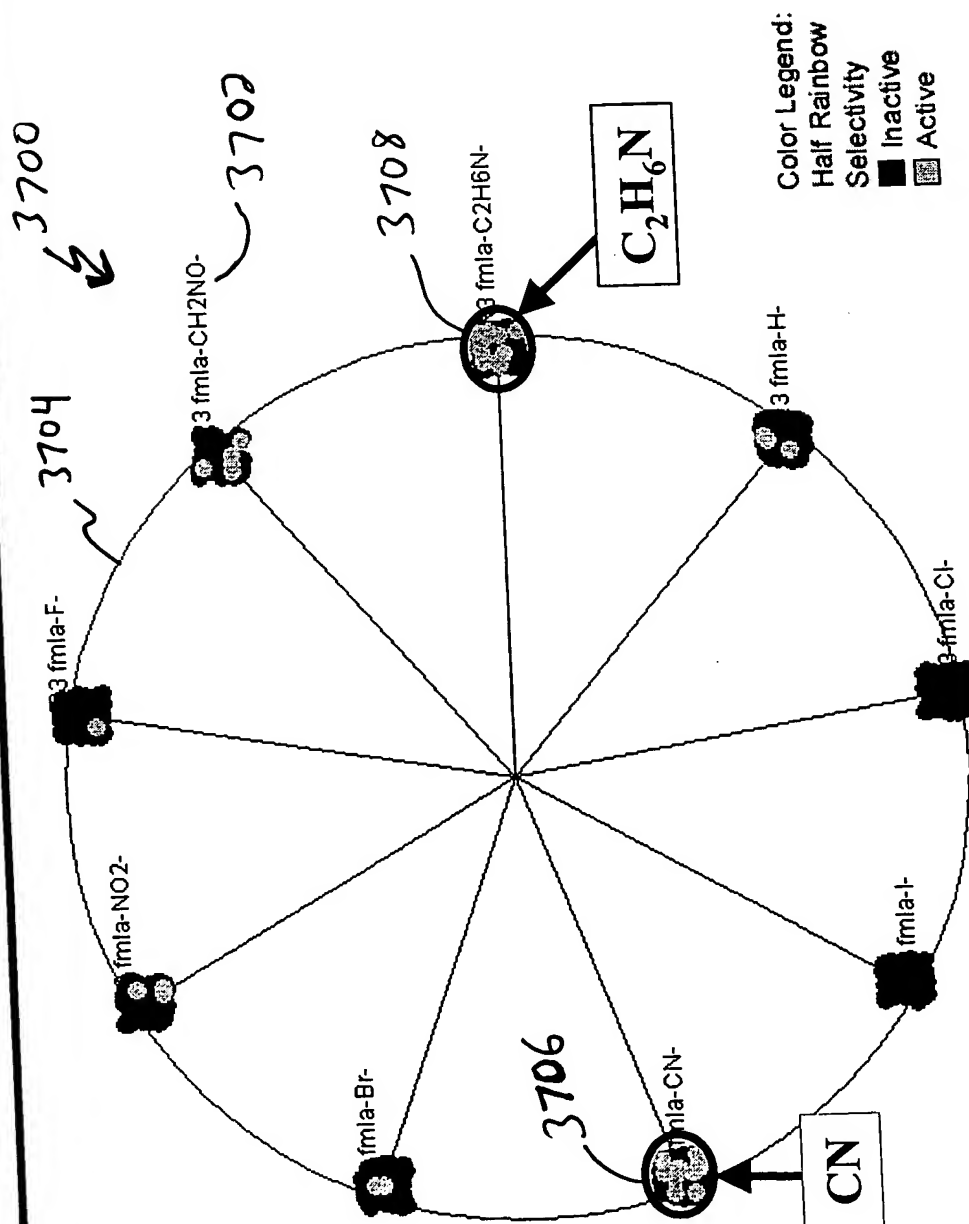


Figure 37

Radial Visualization Showing R_3 & R_4 Attributes

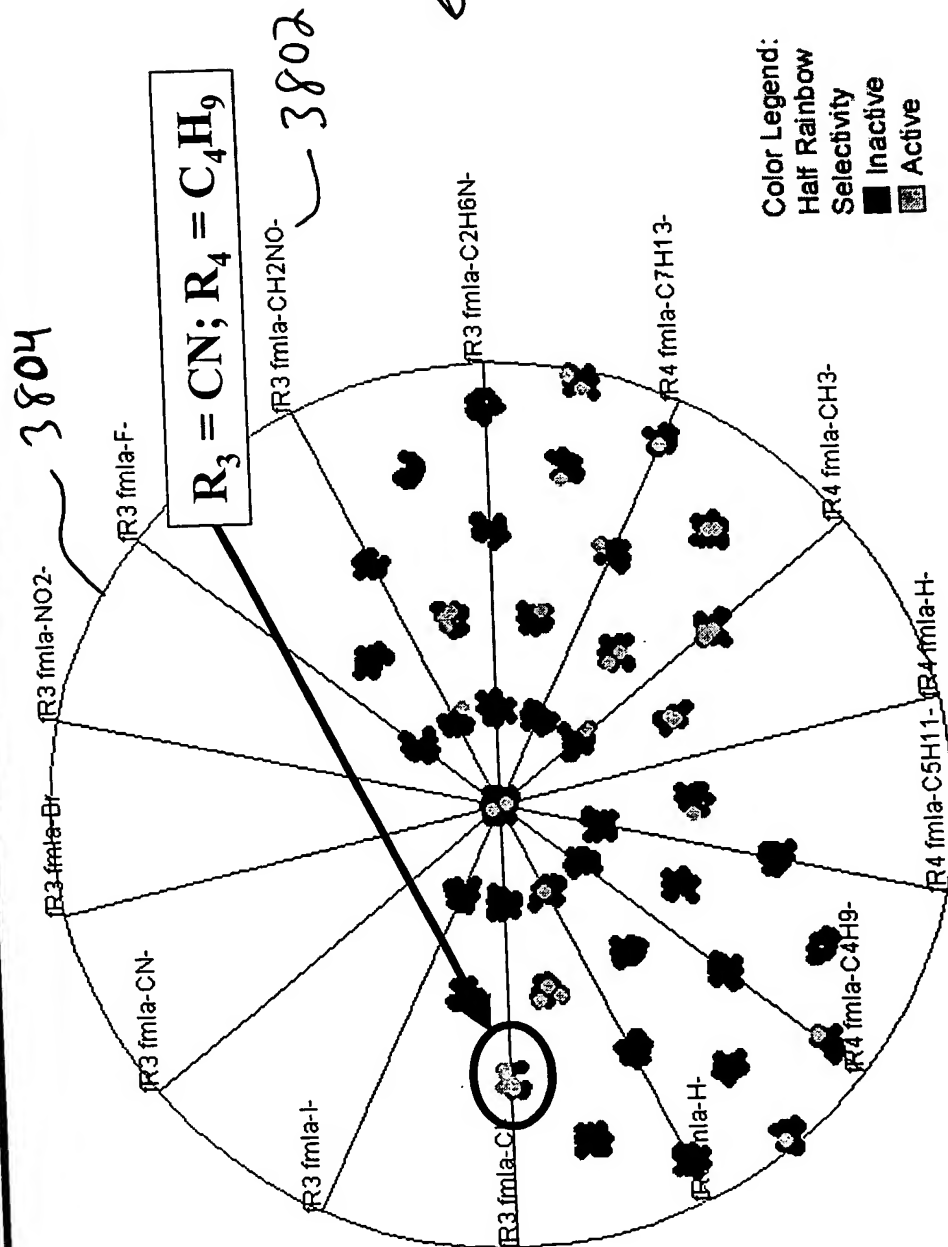
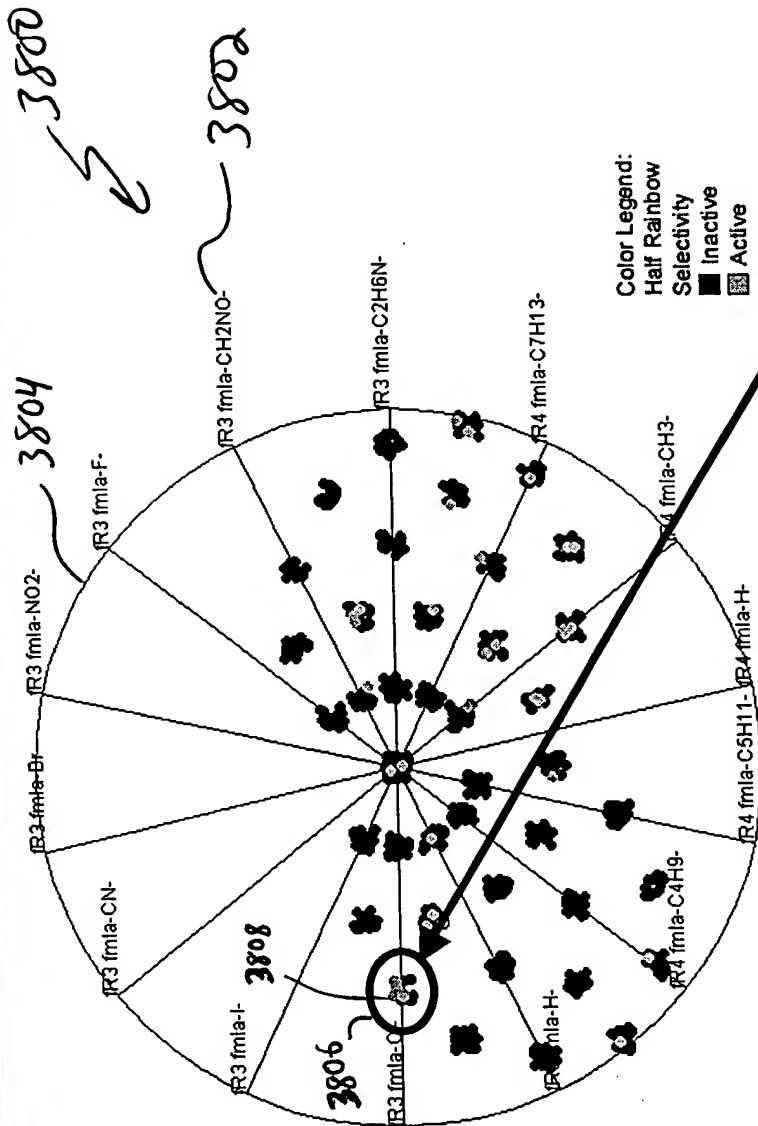


Figure 38

2273661

Radial Visualization Showing R₃ & R₄ Attributes

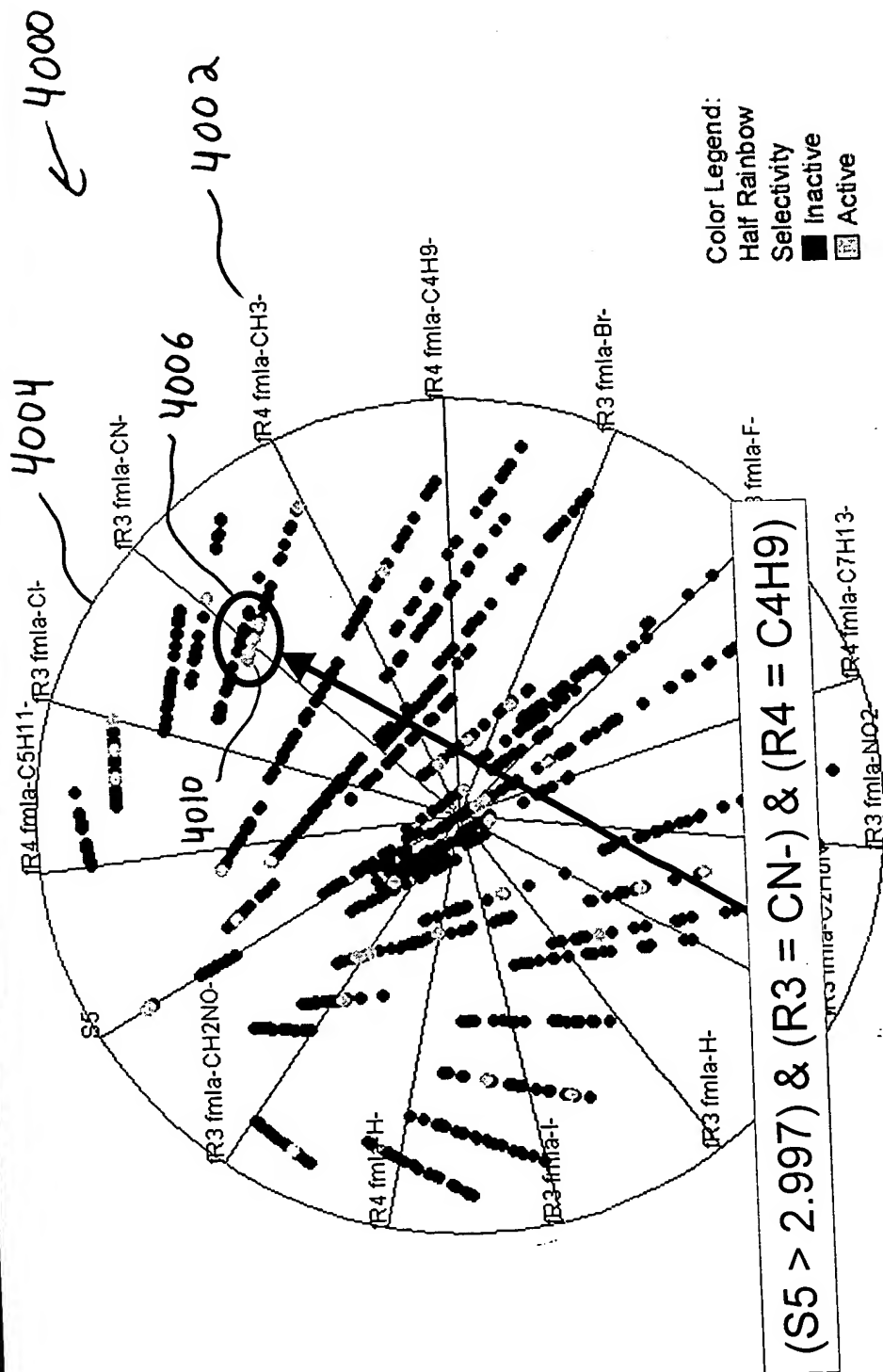
Radial Visualization



Record	LC/MS	Assay 1	Assay 2	Kd 1	Kd 2	R1	R2	R3	R4	S5	Select
937	pass	0.087	355.5	591.7	9.51	C5H5-	C6H11-	CN-	C4H9-	3.00	good
937	pass	0.01	456.4	0.87	0.11	CH3-	C6H11-	CN-	C4H9-	4.43	good
937	pass	0.007	358.8	44.7	3.89	H-	C6H5-	CN-	C4H9-	5.58	good
937	pass	0.002	495.8	78.35	57.52	C9H8N-	C6H11-	CN-	C4H9-	6.44	good

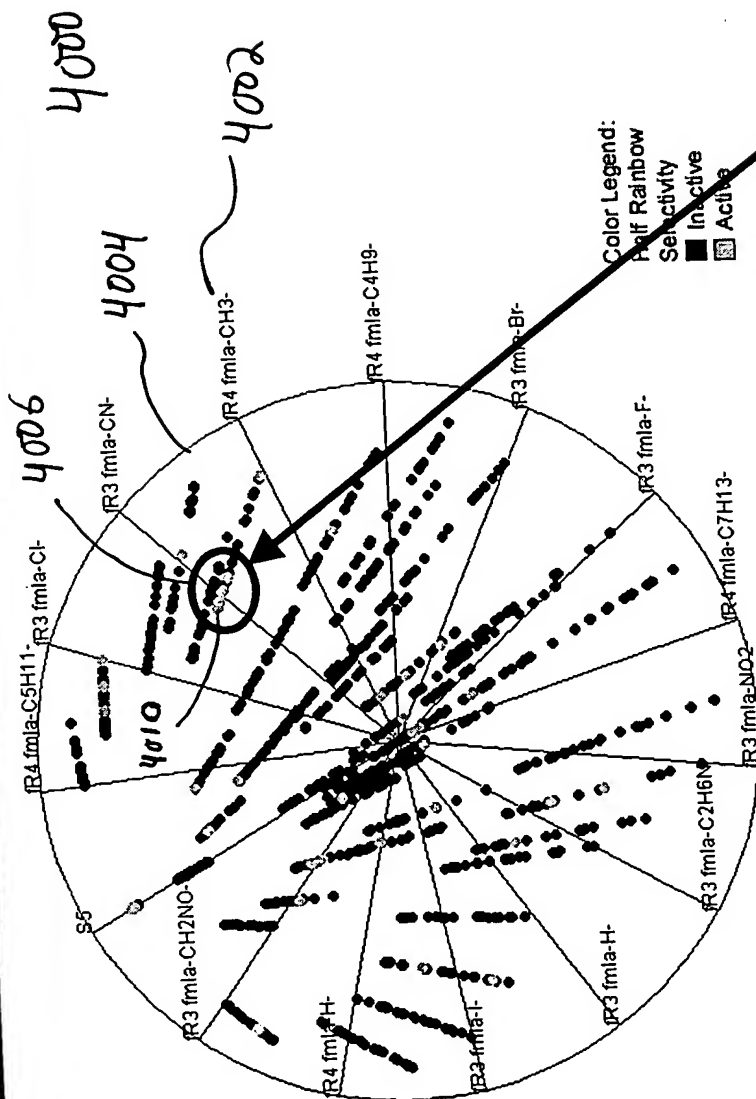
Figure 39

Radial Visualization Showing R_3 , R_4 & S_5 Attributes



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Radial Visualization Showing R₃, R₄ & S₅ Attributes



Record	LC/MS	Assay 1	Assay 2	Kd 1	Kd 2	R1	R2	R3	R4	S5	Select.
937	pass	0.087	355.5	591.7	9.51	C5H5-	C6H11-	CN-	C4H9-	3.00	good
951	pass	0.01	456.4	0.87	0.11	CH3-	C6H11-	CN-	C4H9-	4.43	good
953	pass	0.007	358.8	44.7	3.89	H-	C6H5-	CN-	C4H9-	5.58	good
956	pass	0.002	495.8	78.35	57.52	C9H8N-	C6H11-	CN-	C4H9-	6.44	good
958	pass	0.001	305.8	0.14	7.6	H-	C6H11-	CN-	C4H9-	7.08	good

Figure 41

2273661

2025-10-20

Pearson Cross Correlations

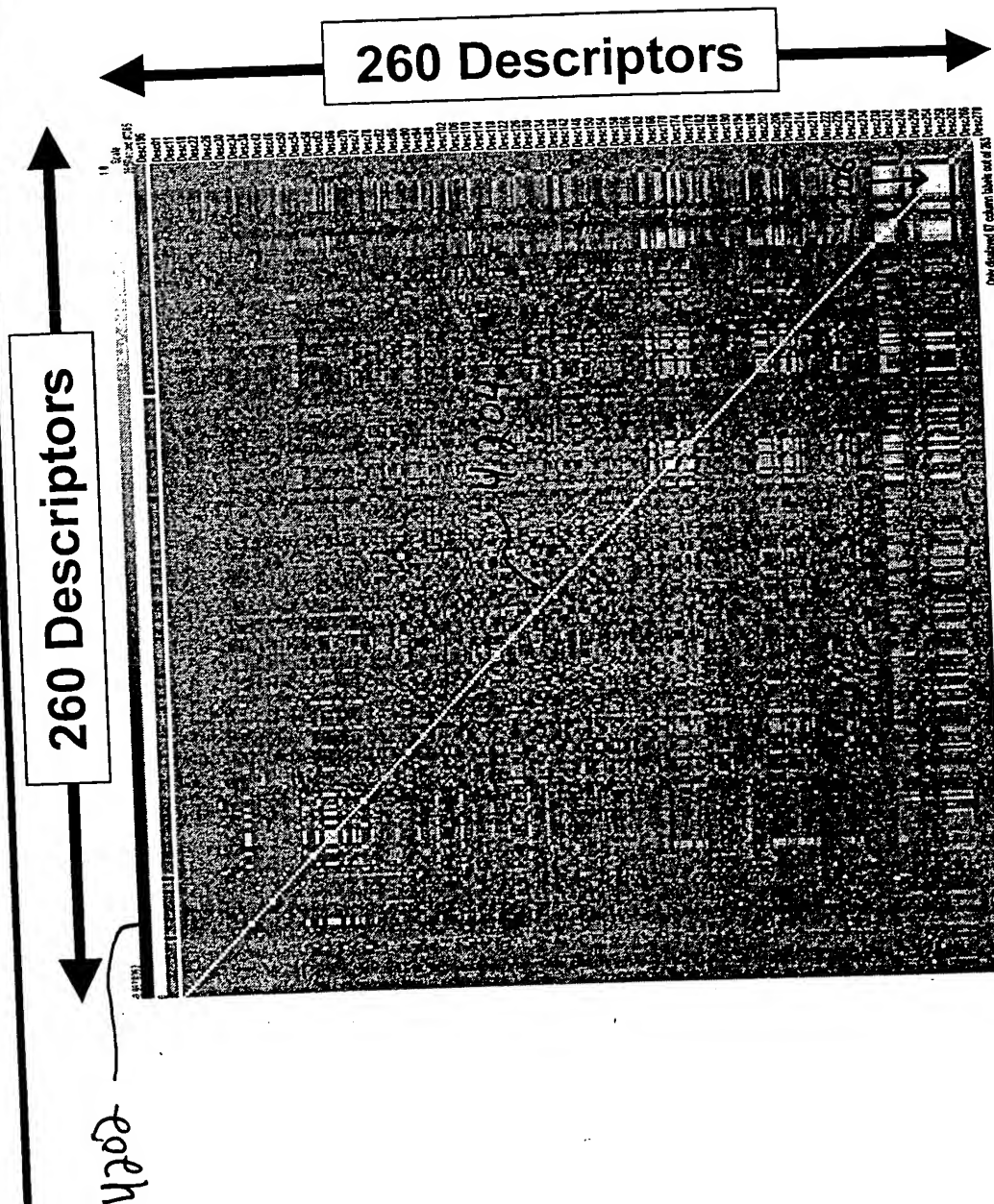


Figure 42

2273661

ISIS Keys

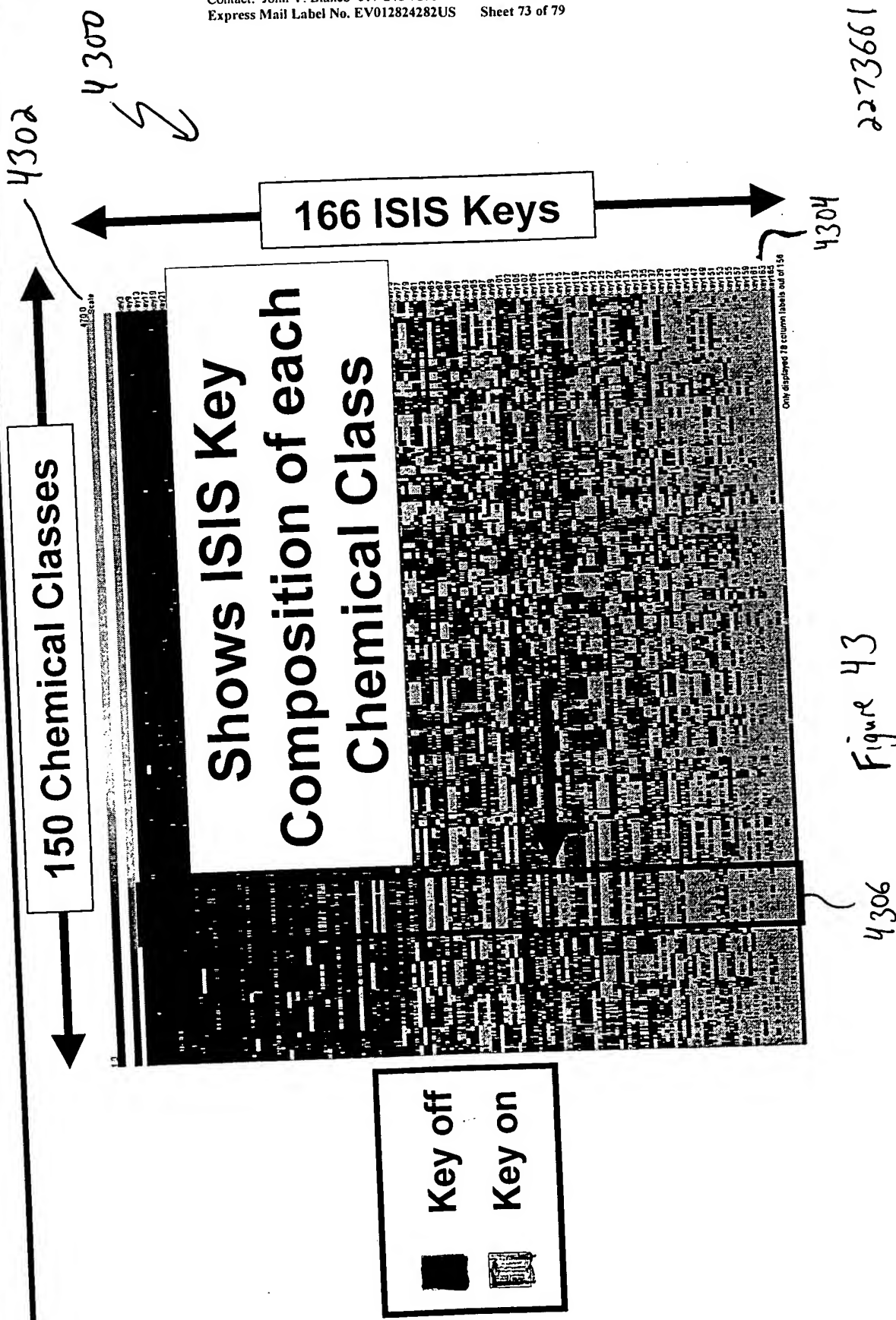
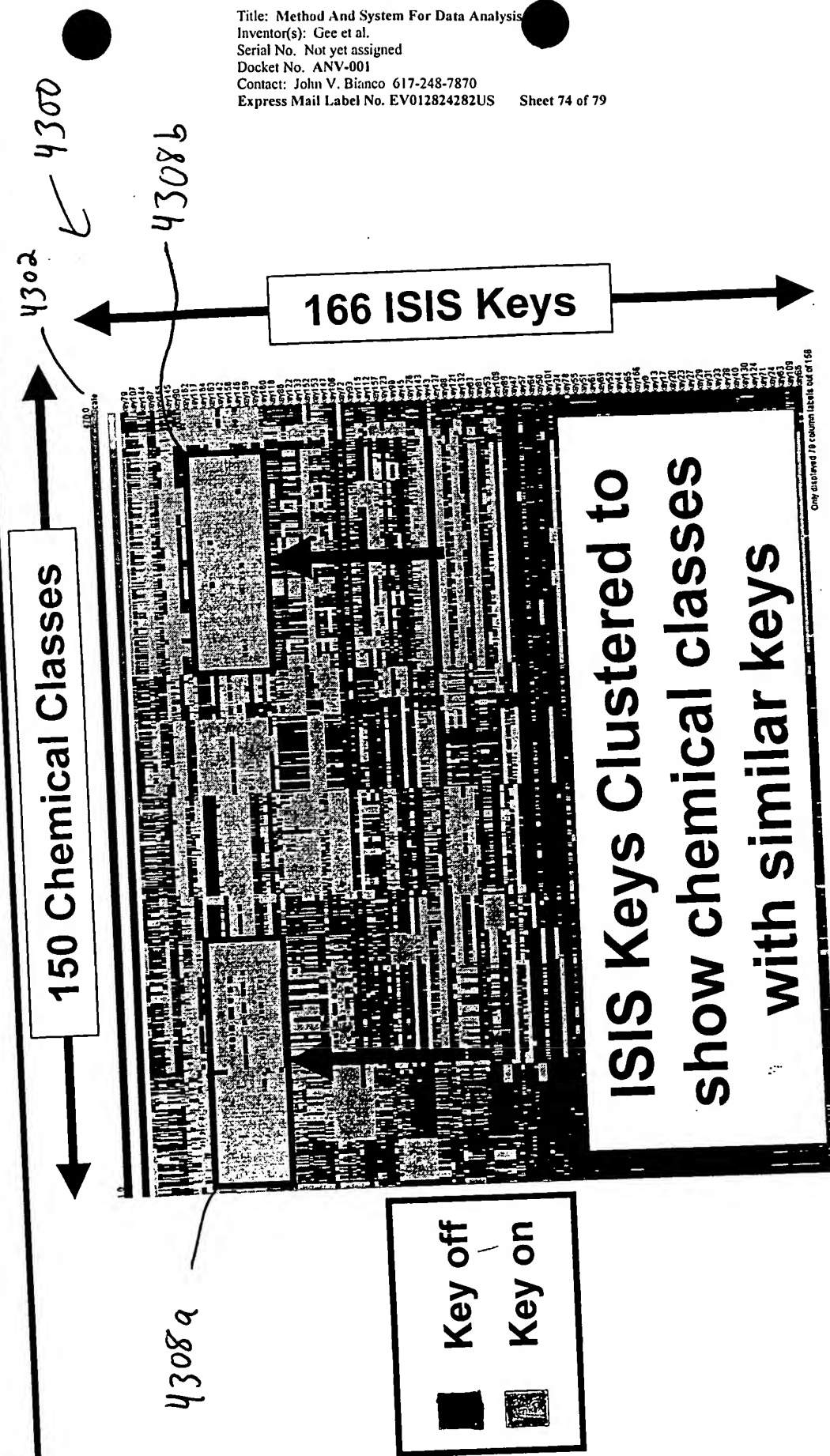


Figure 43

2273661

2025-12-20 16:54:00

ISIS Keys



Title: Method And System For Data Analysis
Inventor(s): Gee et al.
Serial No. Not yet assigned
Docket No. ANV-001
Contact: John V. Bianco 617-248-7870
Express Mail Label No. EV012824282US Sheet 74 of 79

Figure 44

2273661

205420-16944001

Association Rules - Visually

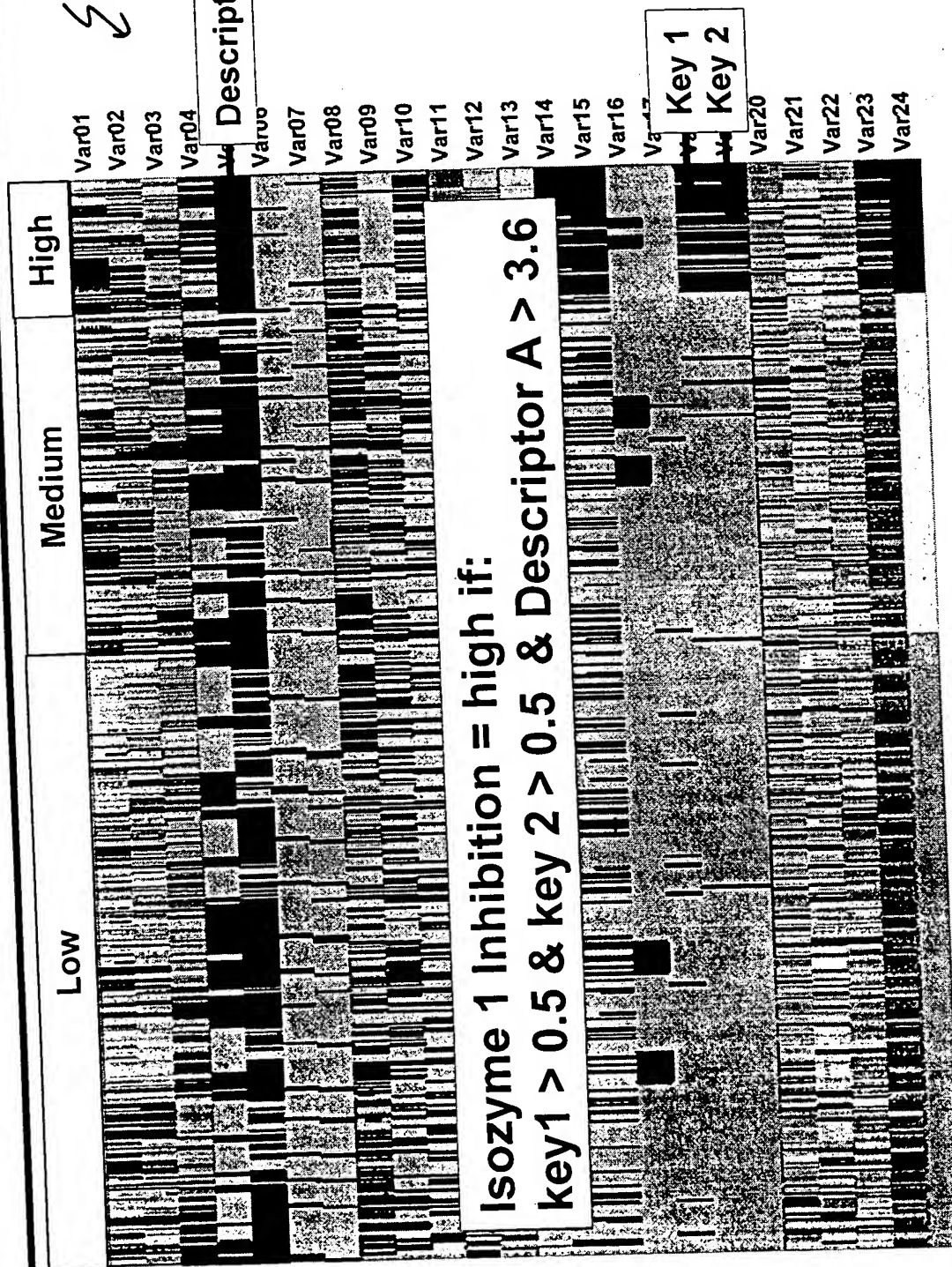


Figure 45

2273661

Exploratory Overview

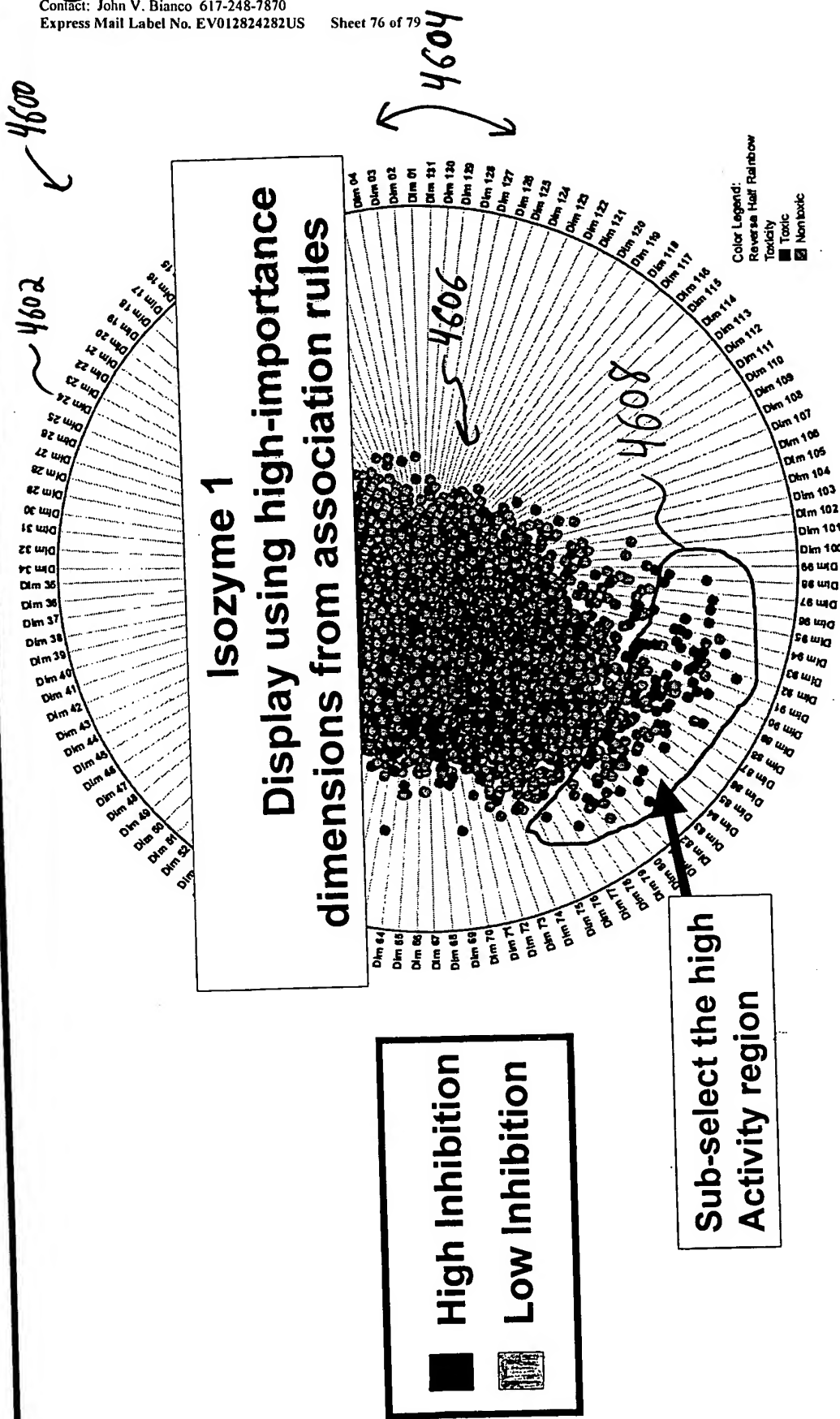


Figure 46

Toxic Distinction

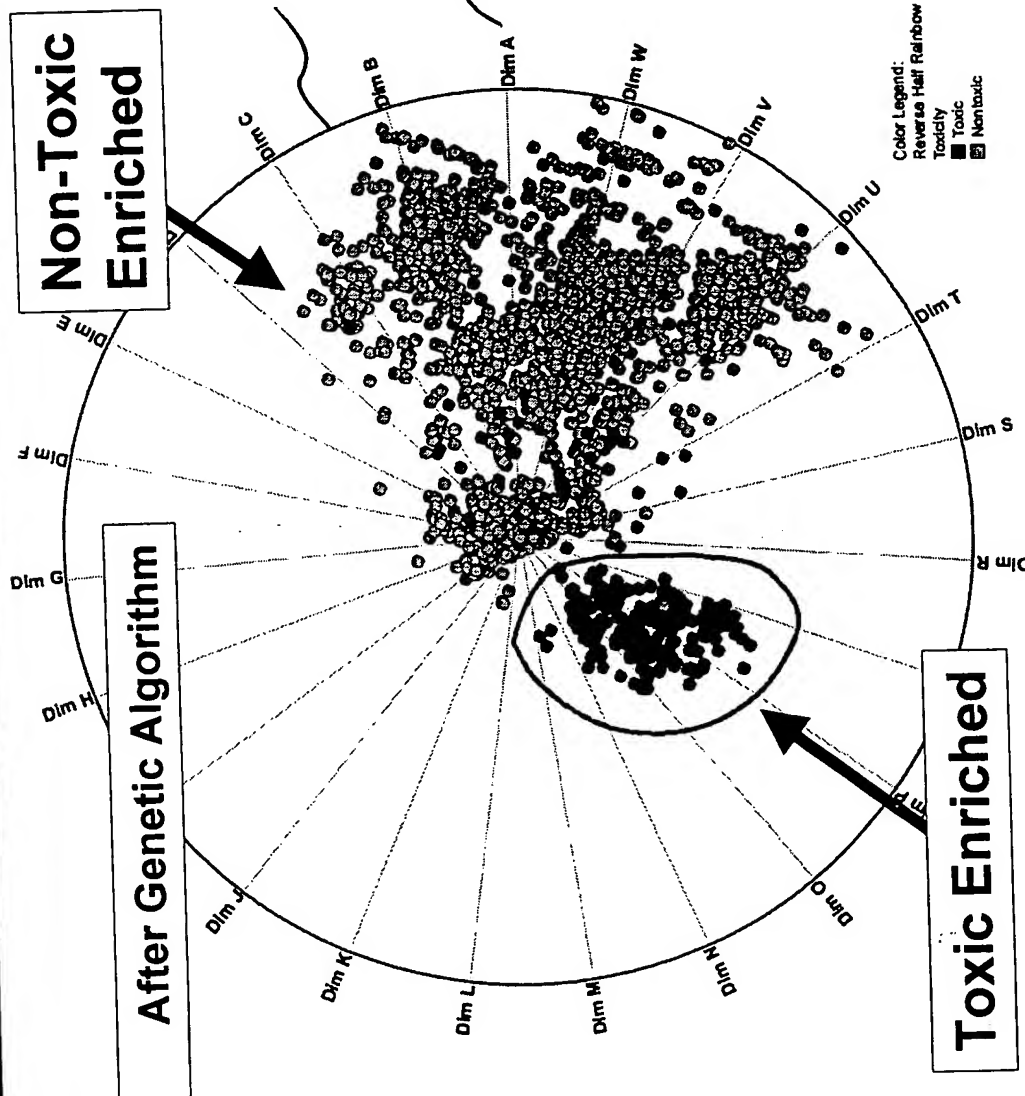
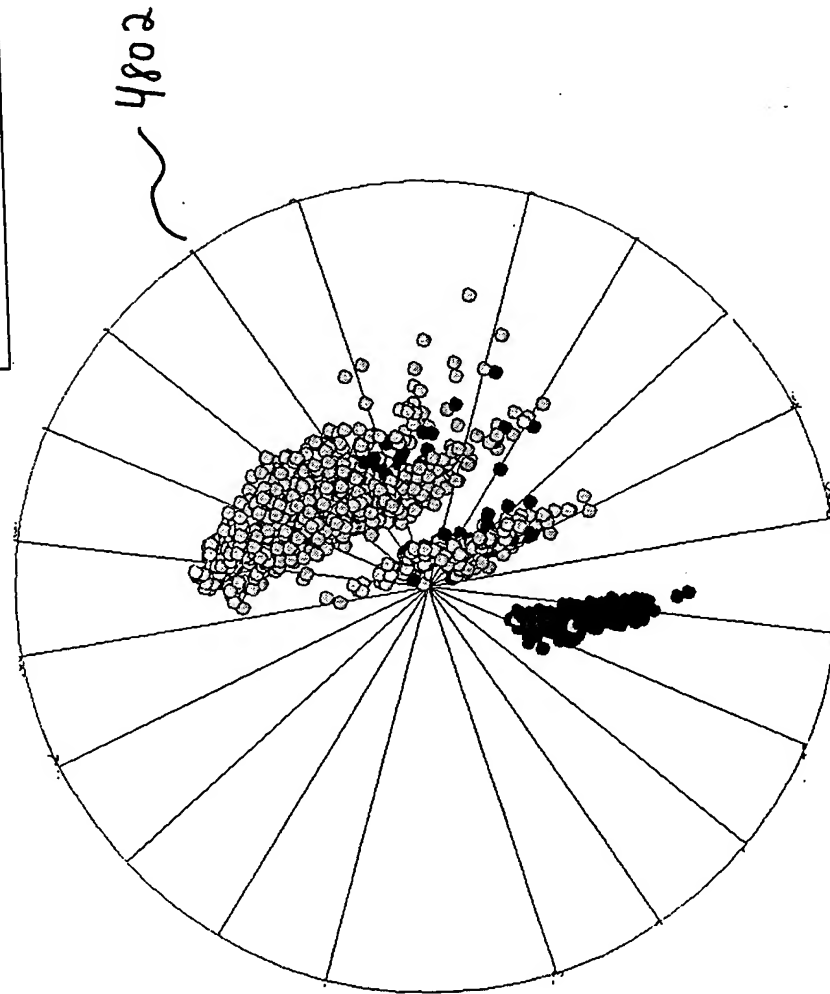


Figure 47

2284985

Toxic Distinction

After AP Algorithm



Color Legend
Half Rainbow
Non-Toxic
Toxic

Figure 48

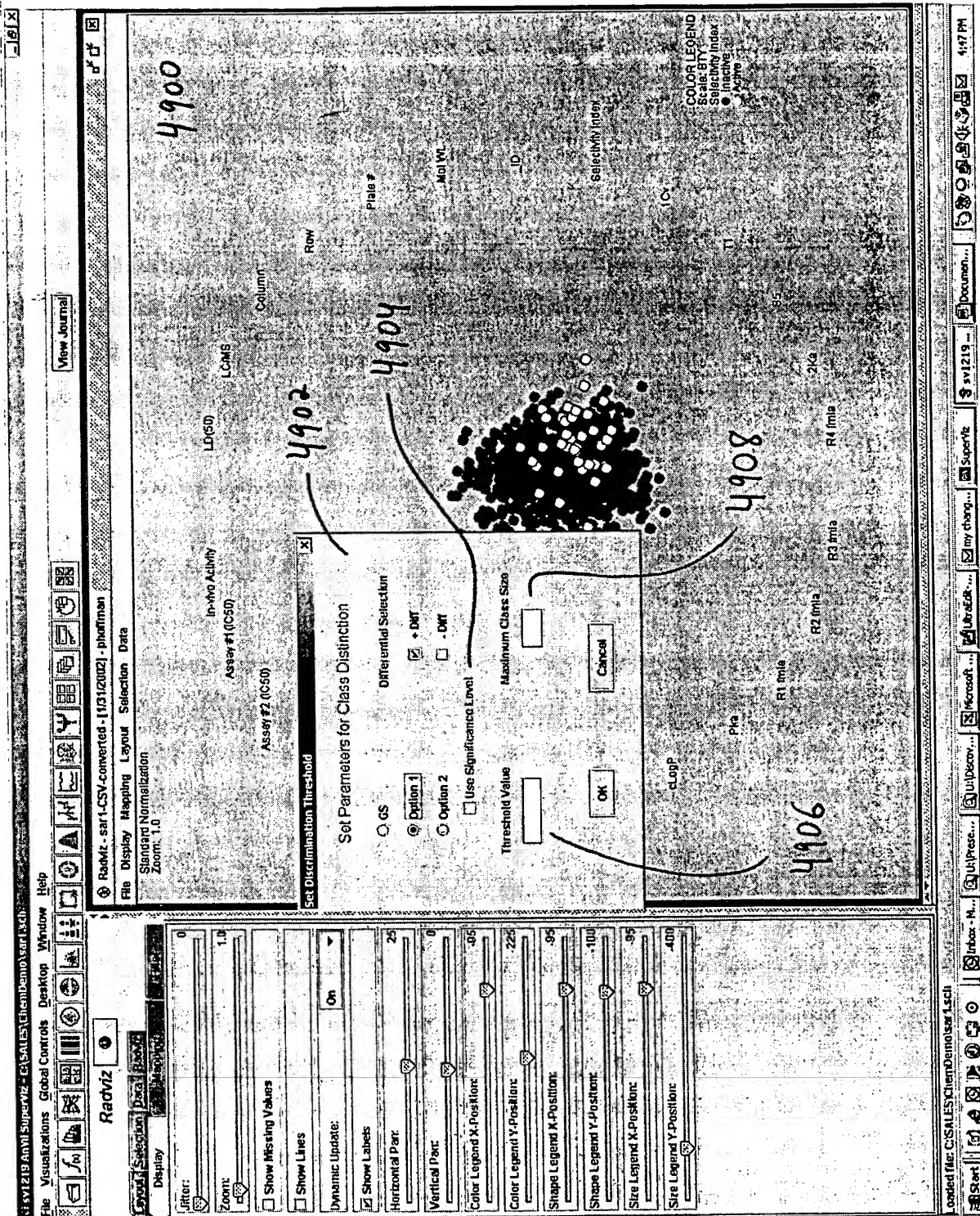


Figure 49